

Revision of *Nicrophorus* in part: new species and inferred phylogeny of the *nepalensis*-group based on evidence from morphology and mitochondrial DNA (Coleoptera : Silphidae : Nicrophorinae)

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Abstract. Carrion beetles of the genus *Nicrophorus* Fabricius, 1775 (Silphidae) are well known for their biparental brood care and monopolisation of small vertebrate carcasses in subterranean crypts. Although the taxonomy of New World species has received modern attention, the fauna of Asia, primarily of the *nepalensis*-group of species, has not. Herein we revise this species-group and describe as new the following seven species: *Nicrophorus charon* Sikes & Madge (Sulawesi), *Nicrophorus herscheli* Sikes & Madge (Sumatra), *Nicrophorus insignis* Sikes & Madge (Flores Island), *Nicrophorus melissae* Sikes & Madge (Nepal, Bhutan), *Nicrophorus reticulatus* Sikes & Madge (Guadalcanal), *Nicrophorus schawalleri* Sikes & Madge (Gansu, Shaanxi, Sichuan Province) and *Nicrophorus trumboi* Sikes & Madge (Nepal, Bhutan). We obtained a preliminary phylogeny using morphology and mtDNA (*COII*). This was inferred using maximum likelihood and Bayesian methods with the Mkv and GTR+I+G models (parsimony was rejected by the Akaike information criterion for being excessively parameter-rich). The phylogenetic signal in the morphological dataset was not strong and results were confounded by a ‘long-branch’ species, *N. reticulatus*. The signal was stronger in the combined dataset and the *COII*-only dataset. The molecular phylogeny supported the new status of species *N. trumboi* and *N. melissae*. Support was found for a mainland origin of the group with subsequent radiations into the Malay Archipelago.

Museum and collections from which specimens were borrowed

coden	Name and address
AMNH	American Museum of Natural History, Central Park West at 79th St. New York, NY 10024-5192, USA
ANIC	Australian National Insect Collection CSIRO Division of Entomology, GPO Box 1700, Canberra, ACT 2601, AUSTRALIA
BMNH	Department of Entomology, The Natural History Museum, Cromwell Rd, London, SW7 5BD, UNITED KINGDOM
BPBM	Bishop Museum, 1525 Bernice St, Honolulu, HI 96817-0916, USA
CASC	California Academy of Sciences, Department of Entomology, San Francisco, CA 94118, USA
CMNC	Canadian Museum of Nature, Insects-Collection Division, PO Box 3443, Station "D" Ottawa, ON K1P 6P4, CANADA
CNCI	Canadian National Collection of Insects, Crop Protection Program, Eastern Cereal and Oilseeds Research Centre, K. W. Neatby Bldg, C.E.F. Ottawa, K1A 0C6, CANADA
CUIC	Cornell University Insect Collections, Dept. of Entomology, Cornell University, Ithaca, NY 14853, USA
DSSC	Private collection of Derek S. Sikes, Dept. Biological Sciences, University of Calgary, Calgary, AB, T2N 1N4 CANADA
EIHU	[=SEHU] Systematic Entomology, Faculty of Agriculture, Hokkaido University, Kita 9 Nisi 9, Kitaku, Sapporo 060, JAPAN
EMUS	Department of Biology, Utah State University, College of Science, Logan, UT 84322-5305, USA
FMNH	The Field Museum of Natural History, Roosevelt Rd at Lake Shore Drive Chicago, IL 60605-2496, USA
HNHM	Coleoptera Collection, Department of Zoology, Hungarian Natural History Museum, H-1088, Budapest, Baross u. 13, HUNGARY.
ITLJ	Laboratory of Insect Systematics, National Institute of Agro-Environmental Sciences, Kannondai 3-1-1, TsukubaIbaraki, 305, JAPAN
IZCAS	[IOZ-CAS] Chinese Academy of Sciences, Institute of Zoology, Beijing, CHINA
JHC	private collection of Jirí Háva, Branická 13, CZ-147 00, Praha 4, CZECH REPUBLIC
JRC	private collection of Jan Růžička, Pod Královkou 7, CZ-169 00 Praha 6, Praha, CZECH REPUBLIC
JSC	private collection of Jan Schneider, Lipová 15, CZ-120 00, Praha 5, CZECH REPUBLIC
MCPM	Milwaukee Public Museum 800 West Wells St., Milwaukee, WI 53233, USA
MCZC	Museum of Comparative Zoology Harvard University, 26 Oxford St. Cambridge, MA 02138, USA
MNC	private collection of Masaaki Nishikawa, 27-1-115, Higashi-kashiwagaya 1, Ebina 243-04, JAPAN
MNHN	Museum National D'Histoire Naturelle, Laboratoire D'Entomologie, 45 rue Buffon, F-75005, Paris, FRANCE
MOC	Systematic Entomology, Faculty of Agriculture, Hokkaido University, Kita 9 Nisi 9 Kitaku, Sapporo 060, JAPAN
MSUC	Center for Insect Diversity Study, Museum Department of Entomology 243 Natural Science, Michigan State University, East Lansing, MI 48824, USA
MVMA	Dept. of Natural Sciences Museum of Victoria, 71 Vicotria Crescent, Abbotsford, Victoria, 3067, AUSTRALIA
MZHF	Zoological Museum, PO Box 17, FIN-00014 University of Helsinki, Helsinki, FINLAND
MZLU	Museum of Zoology, Department of Zoology, Division of Systematics Lund University, Helgonavagen 3, S-233 62 Lund, SWEDEN
NHMW	Naturhistorisches Museum Wien, Zweite Zoologische Abteilung; Insekten, Burgring 7 A-1014, Wien, AUSTRIA
NHRS	Naturhisoriska Riksmuseet of Natural History, Sektion För entomologi Box 50007, 104 05 Stockholm, SWEDEN
NKUM	Dept. of Biology, Nankai University, Tianjin 300071, P. R. CHINA

NMNH	[=USNM] National Museum of Natural History, Smithsonian Institution, Dept. Entomology, Collections Management Unit, NHB MRC 165; 10th & Constitution Ave. N. W. Washington, D. C. 20560, USA
NMNS	National Museum of Natural Science1, Kuan-Chein Rd., Taichung, Taiwan, R.O.C. TAIWAN
NMPC	Národní Muzeum, Entomologicke Odd. PM, Golcova 1, Kunratice 148 00 Praha 4, CZECH REPUBLIC
NSMT	National Science Museum, Hyakunin-cho 3-23-1, Shinjuku-ku, Tokyo, JAPAN
SBPC	private collection of Stewart Peck, Department of Biology, Carleton University, 1125 Colonel By Drive, Ottawa, Ontario K1S 5B6 Ottawa, CANADA
SEMC	Snow Entomological Museum, Natural History Museum, University of Kansas, Lawrence, KS 66045, USA
SMFD	[=SMFC] Forschungsinstitut Senckenberg, Entomologie I, Senckenberganlage 25 D-60325 Frankfurt /M., F. R. GERMANY
SMNS	Staatliches Museum für Naturkunde in Stuttgart, Rosenstein 1, D-70191, Stuttgart 1, F. R. GERMANY
SMTD	Staatliches Museum für Tierkunde, Augustusstraße 2, D-01067 Dresden, F. R. GERMANY
TAMU	[=UWFC] Insect Collection, Dept. of Entomology, Texas A&M University, College Station, TX 77843, USA
TARI	Insect Collection, Taiwan Agricultural Research Institute, 189 Chungcheng Rd. Wufeng, Taichung Hsien, Taiwan 431, Taiwan, R. O. CHINA
UCDC	R. M. Bohart Museum of Entomology, University of California, 1124 Academic Surge, Davis, California, 95616, USA
UMRM	Wilbur R. Enns Entomology Museum, Dept. of Entomology, University of Missouri, Columbia, MO 65211, USA
WBC	private collection of Wolfgang Barries. Kinzerplatz 10-11/3/3/9, A; 1 2 1 0, Wien, AUSTRIA
ZMAN	Instituut voor Taxonomische Zoölogie, Zoölogisch Museum, Universiteit van Amsterdam, Afdeling Entomologie, Plantage Middenlaan 64, 1018 DH, Amsterdam, The NETHERLANDS
ZMAS	Russian Academy of Sciences, Zoological Institute, 199034, Universitetskaya nab., 1, St. Petersburg, RUSSIA
ZMHB	Museum für Naturkunde der Humboldt-Universität zu Berlin, D-10115 Berlin, Invalidenstr. 43, Berlin, F. R. GERMANY
ZMUC	Zoologisk Museum, Universitetsparken 15, DK 2100 Kobenhavn O., Kobenhavn, DENMARK
ZSMC	Zoologische Staatssammlung Münchhausenstraße 21, D-81247, München, München, F. R. GERMANY

Complete lists of Material examined

Asterisks (**) indicate material found at the same higher locality. The country for some label data localities could not be determined, these are listed as 'country not found'

Nicrophorus apo Arnett, 1950: 67

Material examined

29 ♂, 30 ♀, 17 sex undetermined: **PHILIPPINES: Mindanao**, Bukidnon, Mt. Katanglad, elev. 1480 m [8.1°N, 124.9°E] 27–31.x.1959; 1 ♀ (Honolulu [BPBM]); Bukidnon Prov., MT. Kitanglad Range, 17km S, 7km E Baungon, elev. 1550 m, 8°10'N, 124°45'E, 1–31.v.1992 (coll. L. Heaney); 3 ♀ 2 ♂ (Chicago [FMNH]); Davao Prov.: Baclayan, E. slope of Mt. Apo, elev. 1981 m [8°N, 125°E] 1–30.xi.1946 (coll. H. Hoogstraal); 1 paratype ♂ (Chicago [FMNH]); same locality, elev. 1981 m [8°N, 125°E] 12–18.xi.1946 (coll. H. Hoogstraal); 1 paratype ♀ (Chicago [FMNH]) [Davao Prov.] Baclayan, Mt. Apo, elev. 1650 m [8°N, 125°E] 13–15.xi.1946 (coll. D. Davis); 1 ♀ (Washington D.C. [USNM]); Davao Prov.: E. slope of Mt. McKinley, elev. 914 m [8°N, 125°E] 29.iix.1946 (coll. F. G. Werner); 1 paratype ♂ (Chicago [FMNH]) 1 paratype ♀ (Washington D.C. [USNM]); same locality, elev. 1981 m [8°N, 125°E] 3.ix.1946 (coll. H. Hoogstraal & G. Alcasid); 1 paratype ♂ (Washington D.C. [USNM]); same locality, elev. 1981 m [8°N, 125°E] 7.ix.1946 (coll. H. Hoogstraal & G. Alcasid); 1 paratype ♀ 1 paratype ♂ (Chicago [FMNH]) 1 paratype ♀ 1 paratype ♂ (London [BMNH]) 1 ♀ 1 ♂ (San Francisco [CASC]) 2 paratype ♀ (Washington D.C. [USNM]); same locality, elev. 1951 m [8°N, 125°E] 10.ix.1946 (coll. H. Hoogstraal); 2 paratype ♀ 4 paratype ♂ (Chicago [FMNH]); same locality, elev. 1768 m [8°N, 125°E] 17.ix.1946 (coll. H. Hoogstraal); 4 paratype ♀ 3 paratype ♂ (Chicago [FMNH]); same locality, elev. 1006 m [8°N, 125°E] 24.ix.1946 (coll. H. Hoogstraal); 1 paratype ♀ (Chicago [FMNH]); Davao Prov.: Meran, E. slope of Mt. Apo, elev. 1829 m [8°N, 125°E] 8.xi.1946 (coll. H. Hoogstraal); 1 paratype ♀ 1 paratype ♂ (Washington D.C. [USNM]); **Misamis Or. MT. Balatukan, 15km SW of Gingoog, elev. 1000–2000 m [8.83°N, 125.27°E] 27–30.iv.1960 (coll. H. Torrevillas); 1 ♀ (Washington D.C. [USNM]); Mt Apo [8°N, 125°E](coll. E A Mearns); 1 allotype ♂ 1 paratype ♂ (Washington D.C. [USNM]); Mt Apo, Mindanao, Crampton [6.99°N, 125.27°E]; 1 ♀ 1 ♂ (Cambridge [MCZC]); Mt. Apo; Western Mindanao; Brgy.; Ilomabis; Kidapawan City; North Cotabato, elev. 1750 m, 1–30.xi.2004 (coll. D. Mohagan); 1 DNA voucher 08 adult, 1 DNA voucher 09 adult, 1 DNA voucher 10 adult, 1 DNA voucher 11 adult, 1 DNA voucher 12 adult, 1 DNA voucher 13 adult, 1 DNA voucher 14 adult, 1 DNA voucher 15 adult, 1 DNA voucher 16 adult, 1 DNA voucher 17 adult (Calgary [DSSC]); ****probably

Mindanao Mts. [8°N, 125°E](coll. H. Hoogstraal); 1 paratype ♀ (Chicago [FMNH]); South Cotabato, Kidapawan City, brgy : dlomabis, Mt. Apo, elev. 1700 m [6.98°N, 125.27°E] 2.vii.2004 (coll. D. Mohagan); 1 DNA voucher 01 adult, 1 DNA voucher 02 adult, 1 DNA voucher 03 adult, 1 DNA voucher 04 adult, 1 DNA voucher 05 adult, 1 DNA voucher 06 adult, 1 DNA voucher 07 adult, 7 ♀ 10 ♂ (Calgary [DSSC]).

Nicrophorus charon Sikes & Madge, sp. nov.

Material examined

Holotype. ♀ labelled “INDONESIA: Sulawesi, Tengah: Mt. Tambusisi, elev. 1219 m, 1°39’S, 121°21’E, 3–13.iv.1980 (coll. M. J. D. Brendell) BMNH006420Nic.” (London [BMNH]).

Paratypes. 10 ♂, 7 ♀: **INDONESIA: Sulawesi**, Utara, Gng. Amang F. R. nr. Kotamobagu, elev. 1200 m [1°N, 123°E] 4.ii.1985; 3 ♂: BMNH83802Nic, BMNH83803Nic, BMNH83804Nic; same locality, 2.vi.1985; 1 ♂: BMNH83805Nic; Utara Dumoga-Bone N.P., lower montane, 2000 m pitfall trap / R. Ent. Soc. Lond., PROJECT WALLACE, B.M. 1985-10, 1985 (coll. P. Whilton); 2 ♂: BMNH122043Nic, BMNH122045Nic; Utara, Gng. Ambang F. R., Gng. Muajak, nr. Kotamobagu, 1780 m, 1–30.xi.1985; 1 ♀: BMNH122046Nic; 30 km NW Rantepao, Bulu-Bulu, elev. 1600 m [2.98°S, 119.9°E] 9–15.v.1966 (coll. R. Straatman); 1 ♀: BPBM003389Nic; ~30 km NE of Enrekang. Gn. Rantemario. Borong Tangga Camp., 3°24’S, 120°0’E, 5.xi.1993 (coll. J. P. & M. J. Duffels); 2 ♀: ZMAN003702Nic, ZMAN003703Nic; Latimodiongge., elev. 2200 m, 23.vi.1930 (coll. G. Heinrich); 1 ♂: BMNH006421Nic; Palu Central-celebes [0.9°S, 119.86°E] 1–30.iv.1991; 1 ♂: WBC080867Nic; Tengah Lore Lindu N.P., 10 km SE Poloka, Stat. 55 Disturbed lower montane forest ML–light, canopy, elev. 1900 m, 25.iii.1985 (coll. J.P. & M. J. Duffels); 2 ♂: ZMAN003740Nic, ZMAN003741Nic; Tengah Lore Lindu N.P., 10 km SE Poloka, Stat. 57 Disturbed lower montane forest ML–light, canopy, elev. 1900 m, 26.iii.1985 (coll. J.P. & M. J. Duffels); 1 ♀: ZMAN003690Nic; Tengah Lore lindu N.P., Rano Rano 10km NE Gimpu, Stat 41 lower montane forest MV–light, elev. 1600 m [1.6°S, 120.03°E] 14.iii.1985 (coll. J.P. & M. J. Duffels); 2 ♀: ZMAN003688Nic, ZMAN003689Nic.

Nicrophorus herscheli Sikes & Madge, sp. nov.*Material examined*

Holotype. ♀, labelled “[INDONESIA]: Sumatra, N. Sumatra Gng Leuser NP Mt. Mamas, elev. 1630 m, 3°33’N, 97°39’E, 7–10.viii.1983 (coll. H. Räisänen); MCZC73701Nic.” (Cambridge [MCZC]).

Paratypes. 3 ♂, 5 ♀. **[INDONESIA]: Sumatra**, N. Sumatra Gng Leuser NP Mt. Mamas, elev. 1630 m, 3°33’N, 97°39’E, 24–28.vii.1983 (coll. H. Räisänen); 2 ♀: MCZC73703Nic, MCZC73705Nic, 1 ♂: MCZC73699Nic; **same locality, 28 vii; 7.viii.1983; 1 ♂: MZHF73698Nic; **same locality, 7–10.viii.1983; 1 ♀: MCZC73704Nic, 1 ♂: MCZC73700Nic; **same locality, elev. 1650–1680 m, 3°20’N, 97°46’E, 10–17.ix.1983 (coll. H. Räisänen); 1 ♀: MZHF73702Nic; **N. Sumatra Tele [southwest of lake Toba & Samosir Island; southwest of Mt. Belirang, ca. 1700m elev.] [2°33’N, 98°35’E] 23–24.iii.1984 (coll. G. Hangay); 1 ♀: SMNS003361Nic.

Nicrophorus heurni Portevin, 1926: 209*Material examined*

75 ♂, 85 ♀, 56 sex undetermined: **INDONESIA: Irian Jaya**, Abmisibl, 18.ix.1985 (coll. H. V. M.); 1 ♂ (Amsterdam [ZMAN]); Maoke Mountains, road Wamena, Jayaputa, km 48, Primarurwald, elev. 2100 m [4°S, 138°E] 4.xii.1997 (coll. K. Carny); 1 ♀ (Praha, priv.coll [JSC]); Star, Mountains Abmisibil, 9–14.xi.1990 (coll. H. J. G. v. Mastrigt); 2 ♀ (Amsterdam [ZMAN]); **NEW GUINEA:** Adelberts [4.717°S, 145.25°E] 1–31.iii.1974 (coll. H. Ohlmus); 1 ♀ 1 ♂ (Canberra [ANIC]); Bosavi [6.583°S, 142.833°E] 1–30.xi.1974 (coll. H. Ohlmus); 1 ♀ (Canberra [ANIC]); Dormanpadbivak, elev. 1410 m, 1–31.x.1920 (coll. W. C. van Huern); 1 paratype ♀ 1 paratype ♂ (Paris [MNHN]); **Ekuti Range north slope 2400 m. south Wau [7.33°S, 146.5°E] 18.xii.1977 (coll. R. Harmsen & P. Hebert); 2 ♀ 1 ♂ (Ottawa [CNCI]); Frigano, 1–30.iv.1975 (coll. H. Ohlmus); 1 ♂ (Canberra [ANIC]); M’waka, 1–31.iix.1975 (coll. H. Ohlmus); 1 ♂ (Canberra [ANIC]); Madang Dist., Finisterre Mts. Moro. C., elev. 1692 m [6°S, 146.55°E] 30.x.–15.xi.1964 (coll. M. E. Bacchus); 1 ♀ 4 ♂ (London [BMNH]); Mafalu (coll. Pratt.); 1 ♂ (Paris [MNHN]); Mala, elev. 4000 m, 20.xi.1972; 1 ♂ (Paris [MNHN]); Mendi [6.22°S, 143.65°E] 1–31.v.1975 (coll. F. Kili); 1 ♀ (Canberra [ANIC]); Morobe Distr., Buang Area Papakini Villiage, 20 km NE of Mumeng, elev. 1600 m [6.95°S, 146.57°E] 15.iii.1973 (coll. Thomas Davies); 2 ♀ 1 ♂ (San Francisco [CASC]); Morobe Distr., Mt. Misim, elev. 1975 m

[7.217°S, 146.817°E](coll. Stevens); 11 ♀ 1 ♂ (Cambridge [MCZC]); Morobe Distr., Wau. Big Wau Creek, elev. 1600 m [7.37°S, 146.67°E] 12.ix.1970 (coll. P.J. Shanahan); 1 ♀ (San Francisco [CASC]); same locality, elev. 1400 m [7.37°S, 146.67°E] 15.ix.1970 (coll. P.J. Shanahan); 1 ♀ 4 ♂ (San Francisco [CASC]); same locality, elev. 1200 m [7.37°S, 146.67°E] 16.ix.1972 (coll. Thomas Davies); 2 ♀ (San Francisco [CASC]); Northeastern New Guinea; Saiko, Bubu River (Upper Waria River), elev. 1676–1828 m [7.82°S, 147.68°E] 1.ix.–31.x.1936; 1 ♀ (London [BMNH]); Versteeg, 10.xii.1912; 2 ♂ (Amsterdam [ZMAN]); Watabung, Nr. Goroka, E. Hlds, elev. 1829 m [6.08°S, 145.38°E] 17.x.1957 (coll. Munroe & Holland); 1 ♂ (Ottawa [CNCI]); Wau [7.37°S, 146.67°E] 25.xii.1970 (coll. H. Ohlmus); 1 ♂ (Canberra [ANIC]); same locality [7.37°S, 146.67°E] 27.xii.1970 (coll. H. Ohlmus); 1 ♀ (Canberra [ANIC]); same locality [7.37°S, 146.67°E] 14.ii.1971 (coll. H. Ohlmus); 2 ♂ (Canberra [ANIC]); same locality [7.37°S, 146.67°E] 21.ii.1971 (coll. H. Ohlmus); 1 ♂ (Canberra [ANIC]); same locality [7.37°S, 146.67°E] 9.v.1971 (coll. R. E. Parrott); 1 ♀ (Ottawa [CNCI]); Papua New Guinea, Baiyer River Sanct. 20 mi N. Mt. Hagen, elev. 1219 m [5.42°S, 144.07°E] 9–10.vii.1974 (coll. S. Peck); 1 ♀ (Ottawa, priv. coll. [SBPC]); Dutch New Guinea: Cyclops Mts., elev. 1036–1371 m, 1–31.iii.1936 (coll. L. E. Cheesman); 1 ♀ (London [BMNH]); Ekuti Range north slope south Wau, elev. 2200 m [7.33°S, 146.5°E] 21.xii.1977 (coll. R. Harmsen & P. Hebert); 1 ♀ 1 ♂ (Ottawa [CNCI]); Kokoda Trail, 23 km S. Kokoda, Iora Creek, elev. 1400 m [8.87°S, 147.73°E] 3–6.ix.1976 (coll. O. Kukal); 28 ♀ 22 ♂ (Ottawa, priv. coll. [SBPC]) 1 ♀ (Praha, priv.coll [JHC]); same locality, elev. 1900 m [8.87°S, 147.73°E] 6–8.ix.1976 (coll. O. Kukal); 8 ♀ 9 ♂ (Ottawa, priv. coll. [SBPC]); Kokoda Trail, 25km. S. Kokoda, Iora Creek, elev. 1900 m [8.87°S, 147.73°E] 6–8.ix.1976 (coll. O. Kukal); 1 ♀ 2 ♂ (Praha, priv.coll [JRC]); Kokoda Trail, 5 km E. Kagi, elev. 2000 m [9.13°S, 147.67°E] 8–11.ix.1976 (coll. O. Kukal); 3 ♀ 2 ♂ (London [BMNH]) 5 ♀ 8 ♂ (Ottawa, priv. coll. [SBPC]); Mt. Dayman, Maneau Range, north slope, elev. 1550 m [9.83°S, 149.28°E] 5–8.vii.1953 (coll. G. M. Tate); 1 ♀ (New York [AMNH]); Mt. Hagen, , elev. 1829 m, 5–8.vii.1974 (coll. S. Peck); 1 ♂ (Ottawa, priv. coll. [SBPC]); Mt. Kaindi, elev. 2438 m, 21.ii.1978 (coll. E.I. Schlinger); 2 ♂ (San Francisco [CASC]); Namaiyuga, 40km. SE Chuave, 11.xi.1973 (coll. K. W. Stroeder); 1 ♂ (Ottawa [CNCI]); PNG/ EH Prov. [E,B?], Umg. Kainantu [6.28°S, 145.87°E] 1–31.v.1980 (coll. Onerunka); 1 ♀ (Stuttgart [SMNS]); W. Highlands 30mi W. Mt. Hagen, elev. 2438 m, 7–12.vii.1974 (coll. S. Peck); 1 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); Wau, Mt. Kaindi, elev. 2408 m [7.35°S, 146.68°E] 27–29.vi.1974 (coll. S. Peck); 1 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); same locality, elev. 2408 m [7.35°S, 146.68°E] 27–29.vi.1974 (coll. S. Peck); 1 ♀ (Ottawa, priv. coll. [SBPC]); same locality, elev. 2408 m [7.35°S, 146.68°E] 29.vi.–1.vii.1974 (coll. S. Peck); 1 ♀ (Ottawa, priv. coll. [SBPC]); Papua New Guinea:

Eastern Highlands Province, Goroka; Gahavisuka Provincial Park 0324169, 9334748 UTS, elev. –1500 m, 6°0'S, 145°24'E, 1.vi.–4.vii.2005 (coll. Katayo Sagata); 1 DNA voucher 1 adult, 1 DNA voucher 2 adult, 1 DNA voucher 3 adult, 1 DNA voucher 4 adult, 1 DNA voucher 5 adult, 18 adults 1 DNA voucher 7 adult, 1 adult, 1 DNA voucher 6 adult, 28 adults (Calgary [DSSC]).

Literature or database records. NEW GUINEA: Irian Jaya: [3.36°S, 138.38°E] (Peck 2001) [1.01°S, 133.62°E] (Peck 2001).

Nicrophorus insignis Sikes & Madge, sp. nov.

Material examined

Holotype. ♀ labelled “INDONESIA: Flores, Is. Nusa, Tenggara, Gunung Ranakah, elev. 1950 m [8°37'S, 120°32'E] 26.vii.1991 (coll. M. Nishikawa) MNC002506Nic,” (Cambridge [MCZC]).

Paratypes. 8 ♂, 10 ♀: **INDONESIA: Flores Is.** same data as holotype. 1 ♀: NSMT002507Nic; same locality, elev. 1400 m [8°37'S, 120°32'E] 1 ♀: MCZC70013Nic, 1 ♂: MCZC70012Nic; 2 ♂: BMNH002503Nic, BMNH002504Nic, 1 ♀: NSMT002505Nic, 1 ♂: NSMT002502Nic; same data as holotype; 1 ♂: MCZC70009Nic, 1 ♀: BMNH70010Nic; Is. Nusa, Tenggara, near Ruteng, elev. 1200 m [8.58°S, 120.46°E] 23.vii.1991 (coll. C. U. Paukstadt); 1 ♀: MNC70011Nic (Ebina [MNC] Nishikawa private coll); S. Flores, Dry S., 1 x; 30.xi.1896 (coll. Everett.); 1 ♀: MNHN001082Nic; Golo; Lusang Mtns, S. of Ruteng; E of road, 5900'/ 1829 m, 8°40.189'S, 120°28.029'E, ridge top forest, carrion trap, 23.v.2005 (coll. D. S. Sikes); 3 ♂: DSSC123523Nic, DSSC123524Nic, DSSC123525Nic, 4 ♀: DSSC123521Nic, DSSC123522Nic, DSSC123526Nic, DSSC123526Nic.

Nicrophorus insularis Grouvelle, 1893: 161

Material examined

59 ♂, 55 ♀, 5 sex undetermined: country not found: no locality data or date (or illegible); 1 ♀ (Praha [NMPC]); **INDONESIA: Bali**, Bali Is., between Danau Buyan & Danau Tamblingan, Nusa Tenggara, elev. 1100 m [8.25°S, 115.25°E] 8.v.1988 (coll. M. Nishikawa); 1 ♀ 2 ♂ (Calgary [DSSC]) 1 ♀ 2 ♂ (Ebina [MNC] Nishikawa private coll); Bali Is., nr. Bedugul, Nusa Tenggara, elev. 1000 m [8.25°S, 115.25°E] 10.v.1988 (coll. M. Nishikawa); 1 ♀ (Calgary [DSSC]) 1 ♀ (Ebina [MNC] Nishikawa private coll); Mt. Bratan; E of Bedugul; 4700'(alt.); Site 8; 1 km uphill from lat.& long., 8°16.366'S, 115°11.185'E, 16.v.2005 (coll. D. S. Sikes); 1 DNA

voucher 4 adult, 1 DNA voucher 2 adult, 1 DNA voucher 3 adult, 1 DNA voucher 1 adult, 1 DNA voucher 5 adult, 8 ♀ 5 ♂ (Calgary [DSSC]); **[Borneo], Südborneo Bandjermasin [3.33°S, 114.58°E](coll. L. W. Schaufuss G.); 1 ♀ (Berlin [ZMHB]); **Java, elev. 567 m [7.5°S, 110°E]; 4 ♀ 9 ♂ (Berlin [ZMHB]) 1 ♀ (Stockholm [NHRS]); **, 1 ♀ 1 N. humeralis holotype [jnr] ♂ (Paris [MNHN]); Buitenzorg, elev. 204 m [6.58°S, 106.78°E] 1–30.iii.1909 (coll. Bryant & Palmer); 2 ♂ (Ottawa, priv. coll. [SBPC]); **Buitenzorg [Boitenzorg, nr. Bogor / Bandung] [6°35'S, 106°47'E] 1.i.1906; 31.xii.1907 (coll. T. Barbour); 1 ♀ (Cambridge [MCZC]); **G. Goentoer, elev. 36 m [6.58°S, 110.6°E] 1–30.iv.1916 (coll. F. C. Drescher); 1 ♂ (Amsterdam [ZMAN]); **G. Tengger, elev. 810 m [7.08°S, 108.23°E] 1–31.vii.1917; 1 ♀ (Amsterdam [ZMAN]); **Idjen (coll. H. Lucht); 1 ♀ (Amsterdam [ZMAN]); Isl. mt. Pangrange 30 km SE Bogor, elev. 1625 m, 6°30'S, 107°10'E, 16–20.ii.1996 (coll. V. Siniaev & E. Afonin); 1 ♀ 3 ♂ (Praha, priv.coll [JSC]); Ned. Indie, De Vos tot Nederveen Cappel, Kamolan, elev. 148 m [6.98°S, 111.43°E] 1–30.xi.1933; 1 ♀ 1 ♂ (Amsterdam [ZMAN]); ****Nederl. Indie, 1–30.iv.1916 (coll. A. Koller); 1 ♀ (Amsterdam [ZMAN]); **Nongkodjadjar, Overbeck, 1935; 1 ♂ (Dresden [SMTD]); **Occ. Mt. Gedeh [6°47'S, 106°58'E]; 1 ♂ (Paris [MNHN]); **occident. Pengalengan, elev. 1219 m [7°10'S, 107°34'E]1893 (coll. H. Fruhstorfer); 2 ♀ (Paris [MNHN]); **occident. Sukaburni, elev. 610 m, 1893 (coll. H. Fruhstorfer); 1 ♂ (Paris [MNHN]); **orient. Montes Tengger, elev. 1219 m [7.08°S, 108.23°E]1890 (coll. H. Fruhstorfer); 1 ♂ (Paris [MNHN]); **oriental Nong Kodjadjar, elev. 1219 m, 1934 (coll. R. Wegner); 1 ♂ (Berlin [ZMHB]); ****Piek v. Korintji Bünnemeyer, elev. 1500 m, 1–30.vi.1920; 1 ♂ (Amsterdam [ZMAN]); **Poedjoni, Kawi; Walling, elev. 1450 m, 1–31.vii.1937 (coll. W. C. J. Heurn); 1 ♀ 1 ♂ (Amsterdam [ZMAN]); **Preanger (coll. P. F. Sijthaff); 4 ♀ 2 ♂ (Amsterdam [ZMAN]); **same locality (coll. P. F. Sijthoff); 2 ♀ (Wien [NHMW]); **Precger [?] (coll. P. F. V...?); 1 ♂ (Amsterdam [ZMAN]); **Radja Mendala, 3°53'S, 104°22'E, 1896 (coll. Ledru); 1 ♀ 1 ♂ (Paris [MNHN]); Tankuban Perahu nr. Bandung, elev. 2500 m [6.95°S, 107.57°E] 1–31.v.1993 (coll. K. Snyder); 3 ♂ (Logan [EMUS]); same locality, elev. 2500 m [6.95°S, 107.57°E] 2.v.1993 (coll. K. Snyder); 2 ♀ 3 ♂ (Logan [EMUS]); **Tasari, elev. 1766 m [7.88°S, 112.9°E] 1–30.v.1915 (coll. Dr. Raepke); 1 ♀ (Amsterdam [ZMAN]); **Tjibodas , 6°38'S, 105°43'E, 1.v.–31.iix.1897 (coll. Hjaimar Moller); 5 ♀ 6 ♂ (Lund [MZLU]); ****Uiteen doede vat Tjibodas, 6°38'S, 105°43'E, 1–30.iix.1920 (coll. S. Leetmans); 1 ♀ (Amsterdam [ZMAN]); **W. Java, Mt. Gede; Panggerango, Tjibodas, elev. 1400 m [6°47'S, 106°58'E] 1–31.x.1948 (coll. A. M. Neervoort); 1 ♀ (Amsterdam [ZMAN]); **same locality, elev. 1400 m [6°47'S, 106°58'E] 1–30.xi.1948 (coll. A. M. Neervoort); 1 ♀ 2 ♂ (Amsterdam [ZMAN]); **same locality, elev. 1400 m [6°47'S, 106°58'E] 1–

30.vi.1949 (coll. A. M. Neervoort); 1 ♀ (Amsterdam [ZMAN]); **W. Java, Perbavatee, Mt. Gedeh, elev. 1524 m [6°47'S, 106°58'E]; 1 ♂ (Paris [MNHN]); W. Java Puncak Pass, SE Bogor, Telaga Warna, , elev. 1400 m [6.57°S, 106.75°E] 1.ix.1994 (coll. Schuh); 1 ♂ (Wien [NHMW]); **W. Java Tjibodas, elev. 1400 m [6°38'S, 105°43'E] 17.vi.1954 (coll. M. R. Wegner); 1 ♀ (Frankfurt [SMFD]); **W. Java, Tjiujirodean Glen Malaban [?], elev. 1700 m (coll. v. d. Well); 1 ♂ (Amsterdam [ZMAN]); Java [Jawa Timur], Eastern Java, SE Probolinggo, Gn. Argopuro Bremsi, elev. 1000–1200 m [7.95°S, 113.55°E] 17.vii.2003 (coll. A. Riedel); 1 DNA voucher 01 ♀ (Calgary [DSSC]); ****Sumatra** (coll. Dr. J. Bemmsul (..?)); 1 paralectotype ♀ 1 lectotype ♂ (Paris [MNHN]); Gn. Sibayak, N. Sumatra [3.25°N, 98.5°E] 3.v.1989 (coll. K. Maruyama); 1 ♀ 1 ♂ (Ebina [MNC] Nishikawa private coll); **Mt. Singalang, Luglio, 1878 (coll. O. Beccari); 1 ♀ (Paris [MNHN]); N. Sumatra Brastagi, 15.v.1972 (coll. Erber); 1 ♂ (Stuttgart [SMNS]); **N. Sumatra, Brastagi, 1.i.–31.iii.1985; 1 ♀ 1 ♂ (Tokyo [NSMT]); North Sumatra Dolok Merangir, 1–30.iv.1976; 1 ♀ (Stuttgart [SMNS]); **Palembang; 1 ♂ (Paris [MNHN]).

Nicrophorus maculifrons Kraatz, 1877: 101

Material examined

119 ♂, 219 ♀, 5 sex undetermined: **CHINA**: n China; 1 ♂ (London [BMNH]); Nordwestl. China, Chinliang; 1 ♀ (Praha [NMPC]); **Gansu prov.**, Luqu, elev. 2500 m, 11.vii.1990 (coll. M. Nikod'ym); 1 ♀ (Praha, priv.coll [JSC]); **[**Heilongjiang Prov.**], Charbin, Mandshurei, elev. 167 m [45.75°N, 126.65°E]; 1 ♂ (Chicago [FMNH]); ****Kaolingtze, Manchukuo [42°N, 126°E] 2.vii.1940; 2 ♀ (USNM); ****Mandshurei, Gasolinzy [49.59°N, 117.43°E] 16.vii.1949; 1 ♂ (Chicago [FMNH]) [**Jiangsu prov.**], Kiangsu Prov. [31.75°N, 120.25°E](coll. Kolthoff); 1 ♀ (Stockholm [NHRS]) [Liaoning Prov.], Dandong City, Mt. Wu-long-shan [40.1°N, 124.4°E] 20–25.vi.2002; 4 ♀ 1 ♂ (Calgary [DSSC]); **Shaanxi prov.**, Qinling Mountains, elev. 1549 m, 33.43406°N, 108.44844°E, 8–9.ix.2005 (coll. Matt Brandley); 51 ♀ 32 ♂ (Calgary [DSSC]) [**Shanghai prov.**], Shanghai [31.1°N, 121.37°E]; 2 ♀ (Victoria [MVMA]); country not found: Chansi s.o., Tsi Li Vu, elev. 2100 m, 28.vi.1935; 1 ♂ (Paris [MNHN]) [Evseevka, Iman. u. Prim. ool.]?, 2.vi.1910 (coll. [Ikonnúkob]?); 1 ♀ (Ottawa, priv. coll. [SBPC]) [Evsqevka, Prim. obl. Íngarevq]?, 8–9.v.1910; 2 ♀ (Ottawa, priv. coll. [SBPC]); Mao eullchan, 19.ix.1931; 1 ♀ (Paris [MNHN]); no locality data, elev. 500 m, 16.ix.1986; 1 ♂ (Praha, priv.coll [JRC]); no locality data or date (or illegible); 1 ♀ (Chicago [FMNH]) 1 ♂ (Praha [NMPC]) 1 *N. maculiceps* holotype [jnr] ♀ (St. Petersburg [ZMAS]) 1 ♀ (Stuttgart [SMNS]); Pailgam, Kashmir; 1 ♀ (Dresden [SMTD]); Uri, Kashmir; 1 ♂ (Dresden [SMTD]); Zanguebar,

N’Guru, 1885 (coll. R. P. Le Roy); 1 ♀ 2 ♂ (Paris [MNHN]) [Ussuri reg] [Suputinskij ‘apov. Primor.]?, 7.ix.1969 (coll. [KryΩakovskúü?]); 1 ♀ (Ottawa, priv. coll. [SBPC]); **Ussurigebiet Kurruzow l. Zara?; 1 ♂ (Berlin [ZMHB]); **erroneous or doubtful label**: “INDONESIA:Celebes” probably mislabelled- or misid of these specimens., elev. 309 m; 1 ♂ (London [BMNH]);

JAPAN: (coll. Hilgendorf); 1 ♀ (Berlin [ZMHB]);; 1 ♀ (Frankfurt [SMFD]) 1 ♂ (Ottawa, priv. coll. [SBPC]) (coll. Feckl); 1 ♀ (San Francisco [CASC]); 1901; 2 ♀ (London [BMNH]); Sawaraike, Yamanashi P., Nirasaki C. [35.75°N, 138.45°E] 8–9.vii.1998 (coll. M. Mar.); 1 ♀ 3 ♂ (Calgary [DSSC]); Hokkaido [44°N, 143°E] 13.vi.1928 (coll. H. Kono); 1 *N. karafutonis* syntype [jnr] ♀ (Tokyo [NSMT]); ****[Gumma Pref.], Tokura [43.7°N, 141.7°E] 19.ix.1950 (coll. H. Hasegawa); 1 ♂ (Ibaraki [ITLJ]); Higashiyama [43.82°N, 142.68°E] 2.vii.1975 (coll. P. Schaefer); 1 ♀ (Ottawa, priv. coll. [SBPC]); ****Kushiro, Yezo [42.96°N, 144.38°E]; 1 ♀ (Dresden [SMTD]); ** (Mt. Daisengen), Oshima [41.58°N, 140.15°E] 12.iix.1982 (coll. M. Nishikawa); 1 ♂ (Ebina [MNC] Nishikawa private coll); Nopporo [43°1’N, 141°29’E] 14.vi.1986 (coll. M. Ohara); 1 ♀ 1 ♂ (Calgary [DSSC]); same locality [43°1’N, 141°29’E] 27.vi.1986 (coll. M. Ohara); 1 ♂ (Calgary [DSSC]); same locality [43°1’N, 141°29’E] 12.vi.1987 (coll. M. Ohara); 1 ♀ (Calgary [DSSC]); same locality [43°1’N, 141°29’E] 9.iix.1987 (coll. M. Ohara); 1 ♀ (Calgary [DSSC]); Nopporo, Ebetsu [43°1’N, 141°29’E] 29.vi.–4.vii.1992 (coll. K. Konishi); 1 ♀ (Ibaraki [ITLJ]); Otoineppu, Nakagawa exp. forest, 44.7°N, 142.26°E, 8.iix.2000 (coll. S. Suzuki); 1 DNA voucher 03 ♀ (Calgary [DSSC]); Rishiri Is. [45.18°N, 141.25°E] 19.iix.1985 (coll. Y. Nagao); 2 ♂ (Ebina [MNC] Nishikawa private coll); Rishiri Is, elev. 1200 m [45.18°N, 141.25°E] 4.iix.1986 (coll. S. J. Martin); 1 ♀ (London [BMNH]); ****Sapporo, Yezo [44°N, 143°E]; 1 ♀ (Dresden [SMTD]); Tomakomai exp. forest, elev. 266 m, 42°42.542’N, 141°33.932’E, 25.vi.1998 (coll. S. Suzuki); 1 DNA voucher 01 adult, (Calgary [DSSC]) [Honshu], Aomori pref., Mayogatai [40.82°N, 140.75°E] 26–28.vi.1980 (coll. S. Naomi); 1 ♀ (Lawrence [SEMC]); **Chiuzenji [36.73°N, 139.48°E] 19–24.iix.1881 (coll. G. Lewis); 2 ♀ (London [BMNH]); **Echigo [37.83°N, 139.83°E] 19.iv.1934 (coll. Akio Nohira); 1 ♀ (San Francisco [CASC]); ****Fudakake (Kanagawa) [35.5°N, 139.5°E] 14.vi.1980 (coll. M. Nishikawa); 1 ♀ 2 ♂ (Ebina [MNC] Nishikawa private coll); ****same locality [35.5°N, 139.5°E] 6.vii.1980 (coll. M. Nishikawa); 1 ♂ (Ebina [MNC] Nishikawa private coll); **Gifu [35.4°N, 136.75°E] (coll. H. Fruhstorfer); 4 ♀ (Frankfurt [SMFD]); **same locality [35.4°N, 136.75°E]; 1 ♂ (Lund [MZLU]); **Hamikochi Northern Alps [35.917°N, 137.483°E] (coll. Reitter); 1 ♀ (Frankfurt [SMFD]); **Hiogo. [34.65°N, 135.2°E] (coll. Schonfeldt); 2 ♀ 1 ♂ (Frankfurt [SMFD]); **Hiogo (?) [34.65°N, 135.2°E] 1871 (coll. G. Lewis); 1 ♀ (London [BMNH]); **Honsya, Kanagawa: Yokohama, Aobadai [33.95°N, 135.116°E] 6.vii.1973 (coll. Takizawa); 1 ♀ (Stuttgart [SMNS]);

Iwate, Kawai, Yoshbezawa, elev. 470 m [36.3°N, 137.12°E] 12.iix.1991 (coll. A. Smetana); 1 ♀
 1 ♂ (Ottawa [CNCI]) 1 ♂ (Praha, priv.coll [JRC]); **Jokohama [35.46°N, 139.6°E](coll. H.
 Frohstorfer); 1 ♂ (Frankfurt [SMFD]); **Kamigo, Yokohama, Kanagawa Pref. [34.3°N, 132.5°E]
 23.vi.1973 (coll. K. Masumoto); 1 ♂ (Ebina [MNC] Nishikawa private coll); ****Kamihikawa-
 rindo Daibosatsu, Yamanashi Pref. [35.75°N, 138.8°E] 20.iix.1984 (coll. M. Nishikawa); 1 ♀
 (Ebina [MNC] Nishikawa private coll); **Kioto [35°N, 135.75°E]; 1 ♀ (Paris [MNHN]);
 ****Kobe [34.6°N, 135.2°E] 1–31.v.1912; 2 ♀ 1 ♂ (San Francisco [CASC]); ****Komagatake
 Akita Pref., elev. 800 m [39.75°N, 140.8°E] 5.iix.1980 (coll. M. Fujioka); 1 ♂ (Praha [JSCC]) 1
 ♀ (Praha, priv.coll [JRC]); Kyoto Pref. Kyoto, Yase Forest, 35°3.908'N, 135°48.521'E,
 21.vi.1998 (coll. D. S. Sikes); 1 DNA voucher 02 adult,(Calgary [DSSC]); Minami Alps Mt.
 Kaikoma, elev. 2264 m, 16.iix.–13.ix.1986 (coll. S. J. Martin); 1 ♀ (London [BMNH]); Minami
 Alps Nagano Ken Senjodaki, elev. 3000 m, 3.ix.1985 (coll. S. J. Martin); 1 ♀ (London [BMNH]);
 **Mino [35.53°N, 136.91°E]; 3 ♀ 2 ♂ (New York [AMNH]); **same locality [35.53°N,
 136.91°E] 1–30.vi.1914; 1 ♂ (New York [AMNH]); Mt. Donden-yama, Sado Is., Niigata Pref.,
 elev. 750 m [38°N, 138.41°E] 30.iv.–26.v.1990 (coll. M. Nishikawa); 1 ♀ 1 ♂ (Ebina [MNC]
 Nishikawa private coll); ****(Mt. Hachimori), Nagano pref., elev. 1700–1900 m [36°5'N,
 137°45'E] 6–7.iix.1984 (coll. M. Nishikawa); 1 ♂ (Ebina [MNC] Nishikawa private coll); **Mt.
 Ohdaigahara, Nara Pref. [34.18°N, 136°E] 11–12.vi.1988 (coll. M. Nishikawa); 1 ♀ 1 ♂ (Ebina
 [MNC] Nishikawa private coll); ****Mt. Takao, Hachioji, Tokyo, 16.x.1982 (coll. M.
 Nishikawa); 1 ♂ (Ebina [MNC] Nishikawa private coll); **Mt. Takao; san, Tokyo [35.62°N,
 139.25°E] 24–27.iv.1971 (coll. K. Masumoto); 2 ♀ (Ebina [MNC] Nishikawa private coll);
 ****Nagano Pref., Shimashimadani [36°N, 138°E] 3.iix.1931 (coll. T. Iida); 1 ♀ (Ibaraki
 [ITLJ]); **Nara-pref., Ohdaigahara [34.5°N, 136°E] 25–26.vi.1981 (coll. S. Naomi); 1 ♀
 (Lawrence [SEMC]); **Nikko. [36.75°N, 139.6°E] 10–18.iix.1881 (coll. G. Lewis); 1 ♂ (London
 [BMNH]); Sekigahara [35.6°N, 136.46°E] 20.vi.1977 (coll. P. Schaefer); 1 ♀ (Ottawa, priv. coll.
 [SBPC]); ****Suginami, Tokyo [35.7°N, 139.6°E] 17.vi.1955 (coll. N. Fukuhara); 1 ♀ (Ibaraki
 [ITLJ]); **Tokyo [35.75°N, 139.5°E](coll. Bodemeyer); 1 ♂ (Chicago [FMNH]) 1 ♂ (Frankfurt
 [SMFD]); **same locality [35.75°N, 139.5°E](coll. Bodemeyer); 1 ♀ 1 ♂ (Dresden [SMTD]) 2
 ♀ 2 ♂ (Frankfurt [SMFD]); **Yokohama [35.467°N, 139.633°E] 20.iii.–14.iv.1880 (coll. G.
 Lewis); 1 ♀ (London [BMNH]); ****Yokohama, Stauding, 1897; 1 ♂ (Praha [NMPC]);
 ****Yuze Kazuno, Akita Pref. [40.183°N, 140.783°E] 26.vii.1986 (coll. F. Sato); 1 ♀ (Praha,
 priv.coll [JRC]) [Kyushu], Cagosima, S. Japan [Kagoshima] [31.617°N, 130.533°E](coll.
 Nonfried); 1 ♂ (Kobenhavn [ZMUC]); **Fukuoka, Tsukushi-Yaba-Kei [33.333°N, 130.5°E]
 28.iii.1983 (coll. S. Nomura); 1 ♀ (Lawrence [SEMC]); **Kami-Kochiki-Schimal [31.83°N,

129.86°E] 1–31.v.1937; 1 *N. parvulus* holotype [jnr] ♀ (Praha [NMPC]); **Mimasaka Prov. [33.2°N, 129.95°E] 1–31.vii.1912 (coll. J. E. A. Lewis); 1 ♀ (Honolulu [BPBM]); Shikoku [33.75°N, 133.5°E]; 1 ♀ (Budapest [HNHM]); Ishizuchi Mt. NP, Tsuchigoya, elev. 1400 m [33.75°N, 133.5°E] 11–18.ix.1980 (coll. Peck); 5 ♀ 1 ♂ (Ottawa [CMNC]) 1 ♀ (Ottawa [CNCI]) 3 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]) [**KOREA**]: Corée, Env. de Séoul [37.53°N, 127°E] 1913; 7 ♀ 3 ♂ (Paris [MNHN]); **Corée, Hpoung-syou-Ouen, 1913 (coll. Chasseurs indigenes); 1 ♀ (Paris [MNHN]); Corée, Koa-Tchyen (coll. Chasseurs indigenes); 1 ♀ (Paris [MNHN]); Corée, Mirinaï (coll. Chasseurs indigenes); 1 ♀ (Paris [MNHN]); Corée, Taïkou, 1913 (coll. Chasseurs indigenes); 1 ♂ (Paris [MNHN]); Mt. Taebaek, 31.vii.1986; 1 ♀ (Ottawa, priv. coll. [SBPC]); Seishin [41.83°N, 129.92°E]; 1 ♀ 2 ♂ (Frankfurt [SMFD]); Süd Korea, Mt. Deckyn, 26.vii.1985 (coll. Cho Young Bok); 1 ♀ (Stuttgart [SMNS]); Cheju Prov., Cheju-do, Mt. Halla-san, Yongshil route, 33°21'N, 126°30'E, 27.iv.1994 (coll. Peregovits, Ronkay & Vojnits); 2 ♀ (Budapest [HNHM]); South Hwanghae Prov., Haeju, Suyong-san [38.07°N, 125.67°E] 16.x.1987 (coll. Z. Korsós & L. Ronkay); 1 ♀ (Budapest [HNHM]) [**RUSSIA**]: [Åkovdevka, Spask u. Ussur. kr. Kvaßuk], 1927; 2 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); Amurland, Kuldur Village [49.22°N, 131.63°E] 6.vii.1994 (coll. A. Gorodinski); 1 ♀ (Chicago [FMNH]); **Far East, Kunashir I. [44°.34'N, 145°41'E] 16.ix.1994 (coll. A. Gorodinski); 1 ♂ (Chicago [FMNH]); Maritime Prov., Ussuzivsk Distr., near village Kamenushka, 1–20.ix.1984 (coll. S. Tehuzkin); 1 ♀ (Stuttgart [SMNS]); **Radde Amur [48.599°N, 130.616°E]; 1 ♀ (München [ZSMC]); Sachalin, Kriljon, Kalinini env. [43.85°N, 142.07°E] 4.vii.1992; 1 ♀ 1 ♂ (Praha, priv.coll [JRC]); Sachalin. m Tschechova, 12.vi.1988; 2 ♂ (Ottawa, priv. coll. [SBPC]); **USSR: Far East, Kaidalovskij Potok, 12km S of Sobolevo, 28.ix.1989 (coll. M. Sálek); 1 ♀ (Praha, priv.coll [JRC]); **Vladivostok [43°8'N, 131°54'E](coll. I. Bryner); 1 ♂ (Wien [NHMW]); **[Vladivostok] – inferred; 1 *N. maculiceps* paratype [jnr] ♀ 1 *N. maculiceps* allotype [jnr] ♂ (St. Petersburg [ZMAS]); Kurile Archipelago, Kunashir, 70m upstream from Goby Hot Springs, 44°.34'N, 145°40.99'E, 27.vii.1997 (coll. N. Minakawa); 1 ♀ (Seattle [UWFC]); Kuril Is. C. Kunashir, Okhotsk side [44°.34'N, 145°41'E] 1.vii.1977 (coll. S. Axentiev); 1 ♀ (Stuttgart [SMNS]); **Sachalin, S-Sachalin, Aniva Distr., 16.vii.1992; 2 ♀ (Calgary [DSSC]); **S-Sachalin, Novoaleksandroosk, 4–22.iv.1990; 2 ♂ (Calgary [DSSC]); **Sachalin USSR, Aniva Distr., 1–30.vi.1987; 1 ♀ (Calgary [DSSC]); **Sakhalin Isl., Krilon Peninsulare, 1–30.iv.1990 (coll. Kirlov); 1 ♂ (Calgary [DSSC]); **UDSSR Sakhalin Isl., Krilon Peninsulare, 1–30.iv.1990 (coll. Kirlov); 3 ♀ 2 ♂ (Calgary [DSSC]); **USSR Sachalin, m. Tschechova, 12.vi.1988; 2 ♀ (Calgary [DSSC]); **USSR Sakhalin Isl., Krilon Peninsulare, 16.vii.1992 (coll. Kirlov); 1 ♀ (Calgary [DSSC]); Sakhalin, Juzhno-Sakhalinsk [46.97°N, 142.75°E] 20.vii.1993 (coll. A. Gorodinski); 8

♀ 2 ♂ (Chicago [FMNH]); ****S. Sakhalin, 25 km NW Aniva [46.683°N, 142.517°E] 16.ix.1994; 1 ♀ (Praha, priv.coll [JHC]); ****Saghalien, Mt. Tshehov, 26.v.1990; 2 ♀ (Praha, priv.coll [JSC]); **[Siberia], Sibiria or. Tjujujú; 1 ♂ (Wien [NHMW]); ****Sibiria orient. Schipka-Gora (coll. B. v. Bodemeyer); 1 ♂ (Berlin [ZMHB]) 1 ♀ (Frankfurt [SMFD]); **[Ussuri reg], Ewgieniewka, Ussuri [48.47°N, 135.03°E](coll. Jul. Isaak); 1 ♂ (Chicago [FMNH]) 1 ♂ (Stuttgart [SMNS]); Jasnoe, elev. 400 m [45°N, 135°E] 12–19.vii.1989 (coll. N. Nikodým); 1 ♂ (Ottawa, priv. coll. [SBPC]) 1 ♀ (Praha, priv.coll [JHC]); **Near Vladivostok, Primorskij Kray [43°8'N, 131°54'E] 25.vi.1992; 2 ♂ (Ebina [MNC] Nishikawa private coll); ****Prim. kraj [45.42°N, 135.42°E] 20.xi.1951 (coll. Kop.); 1 ♀ (Chicago [FMNH]); **Primorie: Anuchino distr. [43.983°N, 133.017°E] 25.vi.1994 (coll. A. Gorodinski); 1 ♀ 1 ♂ (Chicago [FMNH]); **Primorie reg.: Barabash; Levada, 19.vii.1993 (coll. A. Gorodinski); 2 ♀ (Chicago [FMNH]); **Primorie reg.: Chernye Gory (Black Mts.), Gryaznaia River, 1–30.vi.1990 (coll. S. Plutenko); 4 ♀ 2 ♂ (Chicago [FMNH]); ****Primorskij Kr. Arsenev env. , 27.v.–5.vii.1991 (coll. D. Sausa); 2 ♀ (Praha, priv.coll [JHC]); **Primorskij kraj: Novocugujevka, 26–31.vii.1992 (coll. Snizek); 1 ♀ (Praha, priv.coll [JRC]); **Primorskij: reg Artyom env, elev. 200 m [45°N, 135°E] 1–31.vii.1997 (coll. Plutenko); 1 ♀ 1 ♂ (Praha, priv.coll [JSC]); **Primorskij kray: Krounovka, Medveditsa river, 40 km SW Ussuriysk, elev. 250 m, 43°3'N, 131°15'E, 2–6.ix.1993 (coll. E. Groll & C. Kutzscher); 1 ♂ (Stuttgart [SMNS]); ****Sib. or.-m., Primorje, Komarovka flum. Kamenushka env. , elev. 300 m [51.23°N, 132.13°E] 1–31.vii.1992 (coll. Vorisek); 7 ♀ 1 ♂ (Praha, priv.coll [JHC]); ****USSR: Far East, Kamenuschka near Ussurijsk, 1979; 1 ♂ (Stuttgart [SMNS]); ****USSR: Far East, Ussurijsk, 22.vi.1979; 1 ♀ (Stuttgart [SMNS]); ****USSR, Primorsk Kraj, Arsenev env., 1–30.vi.1991 (coll. Strba); 1 ♀ (Wien [NHMW]); ****Ussuri, elev. 95 m [45.47°N, 133.45°E]; 1 ♀ (Chicago [FMNH]); ****Ussuri, Ogeznaja (Ozeczajaja?) [45°28'N, 133°27'E] 4.vi.1934; 6 ♀ 1 ♂ (Praha [NMPC])

Literature or database records. CHINA: Gansu, Luqu, elev. 2500 m [34°36'N, 102°30'E] 11.vii.1990 (coll. M. Nikodym) (Růžička, Schneider, Sikes & Hava 2002); CHINA: Heilongjiang, Charbin [=Harbin] [45°45'N, 136°38'E] (Růžička, Schneider, Sikes & Hava 2002); Gasolinzcy [=Gaolingzi] [44°52'N, 128°50'E] 16.vii.1949 (Růžička, Schneider, Sikes & Hava 2002); Kaolingtze [=Gaolingzi] [44°52'N, 128°50'E] 2.vii.1940 (Růžička, Schneider, Sikes & Hava 2002); CHINA: Jiangsu, Chinkiang [=Zhenjiang] [32°12'N, 119°26'E] (Růžička, Schneider, Sikes & Hava 2002); CHINA: Shanghai, Shangai [31°15'N, 121°29'E] (Růžička, Schneider, Sikes & Hava 2002); MONGOLIA (Emetz 1975b); NORTH KOREA (Nikolajev & Kozminykh 2002); RUSSIA, east of the Ural river (Nikolajev & Kozminykh 2002).

Nicrophorus melissae Sikes & Madge, sp. nov.

Material examined

Holotype. ♀, labelled “NEPAL: Ganesh Himal, 7 km W Godlang, elev. 2950 m, 28°10'N, 85°14'E, 20.ix.1995 (coll. B. Herczig Gy. M. Laszló) HNHM003464Nic.” (Budapest [HNHM]).

Paratypes. 20 ♂, 32 ♀. **BHUTAN:** Chelaila, elev. 3200 m [27.4°N, 89.5°E] 22.v.1986 (coll. Schmutzenhofer); 1 ♀: SBPC004510Nic; same locality, 9.vi.1986; 4 ♂: SBPC004509Nic, WBC080870Nic, DSSC080873Nic, DSSC080877Nic, 9 ♀: JRC003454Nic, JRC003455Nic, JSC003440Nic, DSSC080869Nic, DSSC080871Nic, WBC080872Nic, WBC080874Nic, WBC080875Nic, WBC080876Nic; China, Bhutan, Chelaila [27.4°N, 89.5°E] 9.vi.1986; 1 ♀: JHC001846Nic; West Bhutan, Paro Distr., Chiley. La, elev. 3000 m [27.4°N, 89.4°E] 21.vi.1988 (coll. C. Holzschuh); 3 ♂ JSC003441Nic, JSC003442Nic, JSC003443Nic [**NEPAL**]: 172 Parbat Dist., zwischen Chitre und Ghandrung, Chitre-Seite des Passes, Tsuga Rhodod., elev. 2800–2900 m, 4–7.v.1980 (coll. Martens & Ausobsky); 1 ♂: SMFC16405; 233 Gorkha Distr. Chuling Khola, Meme Kharka, Wald/ Moräne, 5–6.viii.1983 (coll. Martens & Schawaller); 1 ♀: SMNS003338Nic; Annapurna Himal, between Ghorepani and Geirigan, elev. 1300–2600 m, 25–27.vii.1995 (coll. Gy. M. László, G. Ronkay & G. Csorba); 1 ♀: HNHM000628Nic; centr. Nepal: Birethanti Goropani, 4–9.vi.1992 (coll. Ivo Jenis); 1 ♂: NHMW002021Nic; Ganesh Himal, 7 km W Godlang, elev. 2950 m, 28°10'N, 85°14'E, 20.ix.1995 (coll. B. Herczig Gy. M. Laszló); 2 ♀: HNHM003463Nic, HNHM003465Nic; Ganesh Himal, 8 km W Godlang, elev. 3050 m, 28°10'N, 85°17'E, 14.x.1995 (coll. L. Peregovits & L. Ronkay); 1 ♀: HNHM000691Nic; Ganesh Himal, Nesukharka, 12km S Sompang, elev. 2700 m, 28°9'N, 85°11'E, 21.v.1995 (coll. Gy. Fábíán & L. Ronkay); 2 ♂: HNHM003469Nic, SMNS003335Nic; Kalobeni Kali Gandaki Valley, elev. 2400 m [28°N, 83°E,] 1–31.v.1984 (coll. Holzechuh); 1 ♂: WBC080881Nic; Kangchenjunga Himal Mts. Ghunsa vill., elev. 3375 m, 27.4°N, 87.56°E, 6–10.vii.2000 (coll. Jan Schneider); 1 ♀: JSC080898Nic, 1 ♂: JSC080899Nic; Karnali, Bachtal bel Pahada, elev. 3100–3400 m, 29°4'N, 82°42'E, 2.vi.1997 (coll. J. Weipert); 1 ♀: SMNS080941Nic; Karnali, Hochtal Gothichaur, elev. 2900 m, 29°12'N, 82°18'E, 3.vi.1997 (coll. J. Weipert); 1 ♀: SMNS080940Nic, 1 ♂: SMNS080942Nic; Karnali Prov., Distr. Jumla, 2 km W Gothichaur, elev. 2700 m, 20–21.v.1995 (coll. M. Hartmann); 1 ♂: SMNS003337Nic; Kaski Dist., Birethanti, Gandaki Zone, elev. 2620 m [28.17°N, 84.5°E] 16.x.1981 (coll. S. Uéno); 1 ♀: NSMT003075Nic; Mustang Dist., Mtns. west

of Marpha, 10,850', elev. 3307m, 28°44.637'N, 83°39.903'E, 9.viii.1999 (coll. D. S. Sikes); DNA voucher 03, ♀: DSSC006475Nic; same locality, 11.viii.1999 (coll. D. S. Sikes); DNA voucher 02, ♀: DSSC006377Nic, DNA voucher 04, ♀: DSSC006476Nic; nördl. Dhaulagiri Gompa / Tarakot, elev. 3300–3400 m [28.83°N, 83.5°E] 2–6.vi.1973 (coll. Jochen Martens); 3 ♀ SMFC16407, DSSC006684Nic, SMFC16408, 3 ♂: DSSC006685Nic, DSSC006686Nic, SMNS003340Nic; Solu Khumbu Dist., Mtns east of Lukla, moist cloud forest, elev. 2840–2900 m, 27°41.243'N, 86°44.143'E, 20.viii.1999 (coll. D. S. Sikes); DNA voucher 01, ♂: DSSC006376Nic; südl. Dhaulagiri, Dhorpatan, elev. 3000 m [28.48°N, 83.07°E] 5–13.v.1973 (coll. Jochen Martens); 1 ♀: HNHM002402Nic; same locality, elev. 3000–3200 m (coll. Jochen Martens); 2 ♀: SMFC16406, DSSC006682Nic; same locality, 7–25.v.1973 (coll. Jochen Martens); 1 ♀: SMNS003339Nic; Thakkhola, Chadziuo-Khola bei Ghasa, elev. 2600 m, 1 vi; 30.vii.1970 (coll. Jochen Martens); 1 ♀: SMFC16403, 1 ♂: SMFC16404; Thakkhola, Tukche Thaksang, elev. 3100–3300 m, 1–5.vii.1973 (coll. Jochen Martens); 1 ♀: HNHM002401Nic.

Literature record. **BHUTAN:** Gogono, elev. 3100 m, 10–12.vi.1972 (Schawaller 1977: 260).

Nicrophorus montivagus Lewis, 1887: 340

Material examined

74 ♂, 64 ♀, 2 sex undetermined: country not found: no locality data, 4.ix.1937; 1 ♀ (Tokyo [NSMT]); same locality, 5.ix.1952 (coll. K. Shimoyama); 1 ♂ (Tokyo [NSMT]); same locality, 6.vi.1953 (coll. Y. Kurosawa); 1 ♂ (Tokyo [NSMT]); same locality, 17.ix.1957 (coll. S. Hignina); 1 ♂ (Tokyo [NSMT]) [**JAPAN**]: Kamukoti g. Alps, 23.vii.1911; 1 ♀ (Tokyo [NSMT]); **Honshu, 10.ix.1917 (coll. Matsumura); 1 ♂ (Sapporo [SEHU]); **Alpes de Sasago près de Kofu [35.63°N, 138.78°E] 26.vii.1908 (coll. Edme Gallois); 1 ♂ (Paris [MNHN]); ****Aomori Pref., Nurukawa [40.82°N, 140.75°E] 5.ix.1953 (coll. I. Hattori); 2 ♀ (Ibaraki [ITLJ]); ****Aonebago, Sado Is. [38°N, 138.42°E] 6.vii.1936 (coll. K. Baba, J. Sawano & Y. Suzuki); 1 ♂ (Tokyo [NSMT]); ****Chiuzenji [36.73°N, 139.48°E]; 1 paralectotype ♂ (London [BMNH]); **same locality [36.73°N, 139.48°E] 1–30.vi.1880 (coll. G. Lewis); 2 paralectotype ♂ (London [BMNH]); **same locality [36.73°N, 139.48°E] 19–24.ix.1881 (coll. G. Lewis); 6 paralectotype ♀ 1 lectotype ♂ 3 paralectotype ♂ (London [BMNH]); **Chuzenji [36.73°N, 139.48°E] 15–26.ix.1915 (coll. Edme Gallois); 2 ♂ (Sapporo [SEHU]); **same locality [36.73°N, 139.48°E] 18.vi.1931 (coll. L. Gressitt); 1 ♀ (San Francisco [CASC]); **Chuzenji. Été [36.73°N,

139.48°E]1909 (coll. Edme Gallois); 1 ♂ (Paris [MNHN]); Chuzenji-ko, Nikko, elev. 1300 m [36.73°N, 139.48°E] 15.iix.1998 (coll. M. Kon); 1 DNA voucher 02 adult,(Calgary [DSSC]); Gumma Pref., Nikko distr., 1980 (coll. P. M. Hammond); 1 ♀ 1 ♂ (London [BMNH]); **Hamikochi Northern Alps [35.917°N, 137.483°E](coll. Reitter); 1 ♀ 1 ♂ (Frankfurt [SMFD]); **Insel Sado [38°N, 138.5°E] 1–30.vi.1933 (coll. [Friedrich]); 1 N. mixtus holotype [jnr] ♂ 1 N. mixtus paratype [jnr] ♂ (Praha [NMPC]); Iwate, Iwaizumi, Hitsuton, elev. 800 m [39.85°N, 141.8°E] 11–17.iix.1991 (coll. A. Smetana); 12 ♀ 8 ♂ (Ottawa [CNCI]) 2 ♀ 1 ♂ (Praha, priv.coll [JRC]); same locality, elev. 800 m [39.85°N, 141.8°E] 11–17.iix.1991 (coll. A. Smetana); 1 ♂ (Ottawa, priv. coll. [SBPC]) 1 ♂ (Praha, priv.coll [JHC]) 2 ♀ 3 ♂ (Praha, priv.coll [JRC]); Iwate, Kawai, Yoshibezawa, elev. 1050 m [36.3°N, 137.12°E] 12–17.iix.1991 (coll. A. Smetana); 10 ♀ 7 ♂ (Ottawa [CNCI]) 1 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]) 1 ♀ (Praha, priv.coll [JHC]) 2 ♀ 2 ♂ (Praha, priv.coll [JRC]); same locality, elev. 1050 m [36.3°N, 137.12°E] 12.iix.1991 (coll. A. Smetana); 1 ♀ (Ottawa [CNCI]); same locality, elev. 1050 m [36.3°N, 137.12°E] 15.iix.1991 (coll. A. Smetana); 1 ♀ 2 ♂ (Ottawa [CNCI]); Iwate, Kawai, Zaimokuzawa, elev. 720 m, 15.iix.1991 (coll. A. Smetana); 1 ♂ (Ottawa [CNCI]); **Kamikochi, Nippon Alps, elev. 1524 m [36.3°N, 137.97°E] 18.vii.1939 (coll. E. Suenson); 1 ♀ (Kobenhavn [ZMUC]); **Kamikochi, Northern Alps, elev. 1524 m [36.3°N, 137.97°E] 28.vii.1939 (coll. E. Suenson); 2 ♀ (Kobenhavn [ZMUC]); ****Kimpokusen Mt. Sado Is. [38.1°N, 138.3°E] 7–8.vii.1936 (coll. K. Baba); 1 ♀ (Tokyo [NSMT]); Minami Alps Nagano Ken Todai River, elev. 1200 m, 14.ix.–15.x.1986 (coll. S. T. Martin); 1 ♂ (London [BMNH]); Mt. Donden-yama, Sado Is., Niigata Pref., elev. 750 m [38°N, 138.41°E] 30.iv.–26.v.1990 (coll. M. Nishikawa); 4 ♂ (Calgary [DSSC]) 1 ♀ (Ebina [MNC] Nishikawa private coll); ****(Mt. Hachimori), Nagano pref., elev. 1700–1900 m [36°5'N, 137°45'E] 6–7.iix.1984 (coll. M. Nishikawa); 2 ♀ 1 ♂ (Ebina [MNC] Nishikawa private coll); ****Mt. Hayachine-san, Iwate Pref. [39.56°N, 141.48°E] 29.vi.1967 (coll. K. Tsuchiya); 1 ♂ (Tokyo [NSMT]); ****Mt. Kinpoku, Sado, 22.v.1936 (coll. K. Baba); 1 ♀ (Tokyo [NSMT]); **Nagano Pref., Otari, Otari Spa [36.76°N, 137.9°E] 13–15.vii.1998 (coll. M. Maruyama); 10 ♂ (Calgary [DSSC]); Nagano Pref. Otari spa, Otari vil, elev. 1050 m [36.76°N, 137.9°E] 13–15.vii.1998 (coll. M. Maruyama); 1 DNA voucher 01 adult, 1 DNA voucher 03 ♀ 1 DNA voucher 04 ♀ 1 DNA voucher 05 ♀ 1 DNA voucher 06 ♀ 2 ♂ (Calgary [DSSC]); **Nantai de Chuzenji [Chøzenji-ko lake] [36.733°N, 139.483°E] 26.iix.1911 (coll. Edme Gallois); 1 ♂ (Paris [MNHN]); **Nikko. [36.75°N, 139.6°E] 10–18.iix.1881 (coll. G. Lewis); 1 paralectotype ♀ (London [BMNH]); **same locality [36.75°N, 139.6°E] 10–18.iix.1881 (coll. G. Lewis); 1 paralectotype ♂ (London [BMNH]); **Nikko [36.75°N, 139.6°E] 1–31.v.1909 (coll. Harrington); 1 ♀ (Ottawa [CNCI]); ****Nippon Moyen, env. de Tokio et Alpes de Nikko [36.917°N,

139.75°E]1901 (coll. J. Harmand); 2 ♀ (Paris [MNHN]); ****Oze [34.2°N, 132.2°E] 5.ix.1952 (coll. H. Hasegawa); 1 ♀ (Ibaraki [ITLJ]); ****Tokugo Pass, Nagano Pref. [36.65°N, 138.167°E] 19.vii.1969 (coll. M. Masumoto); 1 ♀ 1 ♂ (Ebina [MNC] Nishikawa private coll); **Tute du lac de Chuzenji [Chøzenji-ko] [36.733°N, 139.483°E] 9.iix.1909 (coll. Edme Gallois); 1 ♂ (Paris [MNHN]); ****Yamagata [38.267°N, 140.317°E] 1–31.vii.1942 (coll. Y. K.); 1 ♂ (Tokyo [NSMT]); ****Yamagata Pref., Mt. Zao [38.267°N, 140.317°E] 8.iix.1953 (coll. K. Sadanaga); 2 ♂ (Ibaraki [ITLJ]); Shikoku, Ishizuchi Mt. NP, Tsuchigoya, elev. 1400 m [33.75°N, 133.5°E] 11–18.iix.1980 (coll. Peck); 1 ♀ (Ottawa, priv. coll. [SBPC]).

Nicrophorus nepalensis Hope, 1831: 21

Material examined

284 ♂, 378 ♀, 26 sex undetermined: **BHUTAN**: Chelaila [27.4°N, 89.5°E] 9.vi.1986; 1 ♂ (Wien [WBC]); **N. of Trashi-cho-ten; Szech. [Tashi Chho Dzong], elev. 2560–3505 m [27.483°N, 89.616°E] 26–31.iix.1929 (coll. H. Stevens); 1 ♀ (Chicago [FMNH]) [**BURMA**]: N. E. Burma Kambaiti, elev. 2134 m [25.4°N, 98.15°E] 4–8.vi.1934 (coll. R. Malaise); 2 ♀ (Stockholm [NHRS]); Terrassarín (Terkasserín?), 20.iii.1994 (coll. Lehmann); 1 ♂ (Stuttgart [SMNS]); **CHINA**: Nordwestl. China, Chinliang (coll. Reitter); 1 ♂ (Praha [NMPC]); **[**Anhui prov.**], Anhwei Kouy Tchera, 15.vii.1938 (coll. F. Touj?); 1 ♀ (Paris [MNHN]) [**Fujian Prov.**], Kuatun, 27.4°N, 117.4°E, 25.iv.1939 (coll. T. H. Cheng); 1 ♂ (Ottawa, priv. coll. [SBPC]); ****Kuatun (Fukien), elev. 2300 m [26°0'N, 118°0'E] 1.i.–30.xii.1938 (coll. J. Klapperich); 3 ♂ (USNM); **Kuatun, Fukien, elev. 2300 m [27°40'N, 117°40'E] 24.iv.1946 (coll. Tschung Sen); 1 ♂ (Stuttgart [SMNS]); **same locality, elev. 2300 m [27°40'N, 117°40'E] 15.vi.1946 (coll. Tschung-Sen); 1 ♀ (Budapest [HNHM]); **same locality, elev. 2300 m [27°40'N, 117°40'E] 15.iix.1946 (coll. Tschung-Sen); 1 ♂ (Budapest [HNHM]); **same locality, elev. 2300 m [27°40'N, 117°40'E] 14.ix.1946 (coll. Tschung-Sen); 2 ♂ (Budapest [HNHM]); Mt. Wuyi: Sangang [27.75°N, 117.68°E] 24.iv.1993; 1 adult,(Tianjin [NKUM]); **Runtun (Fukien), 27°40'N, 117°40'E, 4.vii.1938 (coll. V. Klapperich); 1 ♂ (Stuttgart [SMNS]); **Gansu prov.**, Gansu, Wudu [33°12'N, 104°28'E] 25–27.vi.1997 (coll. E. Kucera); 1 ♀ (Wien [WBC]); **[Guangxi prov.], Chang Yang [Chang'an] near Ichang [26°N, 109.57°E]; 1 ♀ (Paris [MNHN]); **Gongchen Co., Mt. Dayaoshan [24.1°N, 110.3°E] 1–5.vi.2002; 4 ♀ 2 ♂ (Calgary [DSSC]); **Guangki, Linguic, Ping shan Mts. , elev. 700–1300 m, 25°33'N, 109°36'E, 19–23.iix.1998

(coll. L & R. Businsky); 1 ♀ (Praha, priv.coll [JSC]); ****Ichang, elev. 1828–2438 m [26°N, 109.57°E]; 1 ♂ (Paris [MNHN]); **Hainan prov.** (194) 30km E Maoyang, Wuzhi Shan Resort, elev. 700–800 m [19.2°N, 109.5°E] 18.i.1996 (coll. Jäch); 1 ♂ (Wien [NHMW]); **[**Hebei Prov.**], Kalgan Jnn-shan [Zhangjiakou], elev. 980–2100 m [40.8°N, 114.867°E]; 1 ♀ (Berlin [ZMHB]); **Hunan Prov.**, Hoeng Shan [=Heng Shan mts, N Hengyang], elev. 900 m [27°18'N, 112°41'E] 14–22.iv.1933 (coll. H. Höne); 1 ♂ (Berlin [ZMHB]); Hoeng-Shan, elev. 900 m, 14–22.iv.1933 (coll. H. Höne); 1 ♀ (Berlin [ZMHB]); **[Jiangsu prov.], Kiukiang [29.73°N, 115.98°E] 1–31.v.1887 (coll. A. E. Pratt); 1 ♀ (Paris [MNHN]); **Shaanxi prov.**, Qinling Mountains, elev. 1549 m, 33.43406°N, 108.44844°E, 8–9.iix.2005 (coll. Matt Brandley); 1 DNA voucher 14 adult, 1 DNA voucher 15 adult, 1 DNA voucher 16 adult, 1 DNA voucher 17 adult, 1 DNA voucher 18 adult, 1 DNA voucher 19 adult, 1 DNA voucher 20 adult, 1 DNA voucher 21 adult, 1 DNA voucher 22 adult, 1 DNA voucher 23 adult, 1 DNA voucher 24 adult, 1 DNA voucher 25 adult,(Calgary [DSSC]); Xi'an, Qinling Mts., 25–26.iv.1990; 1 ♀ (Ebina [MNC] Nishikawa private coll); **Sichuan**, Kanding [Kangding] [30°5'N, 102°4'E] 30.vi.2004; 1 ♀ 1 ♂ (London [BMNH]); Sichuan Prov., elev. 2073 m (coll. D. C. Graham); 2 ♀ (Ottawa, priv. coll. [SBPC]); Beh Luh Din 30 mi N Chengtu, elev. 1829 m [30.617°N, 104.1°E] 1.vii.–31.iix.1933 (coll. D. C. Graham); 1 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); Chungking, elev. 182–457 m, 1–30.ix.1930 (coll. D. C. Graham); 1 ♂ (Ottawa, priv. coll. [SBPC]); Ganzi prefecture, Kangding Co., Pengta town, Tongling village, elev. 2420 m, 30°29.713'N, 102°17.872'E, 28.iix.2005 (coll. D. S. Sikes); 1 DNA voucher 26 adult, 1 DNA voucher 27 adult,(Calgary [DSSC]); Gonga Shan mt. Moxi [31.37°N, 102.12°E] 21–24.vii.1992 (coll. J. Schneider); 1 ♀ (Praha, priv.coll [JSC]); Suifu [28.77°N, 104.57°E] 1–31.x.1930 (coll. D. C. Graham); 2 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]); same locality [28.77°N, 104.57°E] 1–10.x.1930 (coll. D. C. Graham); 1 ♀ (Ottawa, priv. coll. [SBPC]); same locality [28.77°N, 104.57°E] 12.xi.1930 (coll. D. C. Graham); 2 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]); same locality [28.77°N, 104.57°E] 18–19.xi.1930 (coll. D. C. Graham); 2 ♀ (Ottawa, priv. coll. [SBPC]); **Szechuan, Giufu Shan, elev. 1500–2000 m (coll. E. Reitter); 5 ♀ (Praha [NMPC]); **same locality (coll. E. Reitter); 2 ♀ (Praha [NMPC]); ****Szechuan, mer., Mts. Kinfushan pr. flum., elev. 2000 m (coll. Sung-Kanho); 1 ♀ 1 ♂ (Wien [NHMW]); **Szechuan, Mukue Tatsienlu [30.05°N, 102.03°E](coll. Em. Reitter); 3 ♀ 2 ♂ (Praha [NMPC]) 1 ♀ (Praha, priv.coll [JRC]); Szechuan, near Kiating, Shin KaiSi Mt Omei, elev. 1341 m [29.53°N, 103.35°E] 1921 (coll. D. C. Graham); 1 ♂ (Ottawa, priv. coll. [SBPC]); **Szechuan, Nitou Tatsienlu [30°3'N, 102°2'E](coll. Em. Reitter); 1 ♀ (Praha [NMPC]); **Szechuan, Tatsienlu Yüling Süd [30°3'N, 102°2'E](coll. E. Reitter); 2 ♀ 4 ♂ (Praha [NMPC]) 1 ♀ (Praha, priv.coll [JRC]) 1 ♀ (Wien [NHMW]); **Szechuan, Tatsienlu Yüling Süd [30°3'N,

102°2'E]; 1 ♂ (Praha [NMPC]) 1 ♂ (Praha, priv.coll [JRC]) 1 ♀ (Wien [NHMW]); Szechwan Wen-ch'uan, elev. 1219–1828 m, 1–31.vii.1938 (coll. D. C. Graham); 1 ♂ (Ottawa, priv. coll. [SBPC]); same locality, elev. 1829 m, 1–30.ix.1938 (coll. D. C. Graham); 2 ♀ (Ottawa, priv. coll. [SBPC]); **Tatsienlu Kiulong [Jiulong] [29°N, 101.8°E](coll. Reitter); 5 ♂ (Frankfurt [SMFD]) 7 ♀ 7 ♂ (Praha [NMPC]); W, Yingxiuwan [31.066°N, 103.483°E] 20–26.vi.1996 (coll. Benes & Stepar); 1 ♀ (Wien [WBC]); **Yunnan prov.**, Habashan; Habashan Mts., elev. 3150–3500 m, 27°19'N, 100°8'E, 16–18.vi.2004 (coll. Fouquet R. + H.); 1 ♀ (London [BMNH]); **[Zhejiang prov.], **Chekian Prov.**, West Tien Mushan, elev. 1500 m, 23.iv.1932; 1 ♂ (Berlin [ZMHB]); ****Chekian Prov., West Tien Mushan, elev. 1500 m, 10.vii.1932; 1 ♀ (Berlin [ZMHB]); ****Chekiang Prov., West Tien-Mu-Shan, elev. 1600 m, 31.ix.1932 (coll. H. Höne); 1 ♀ (Berlin [ZMHB]); ****Chekiang Prov., West Tien-Mu-Shan, elev. 1600 m, 20.ix.1932 (coll. H. Höne); 1 ♀ (Berlin [ZMHB]); ****same locality, elev. 1600 m, 5.x.1932 (coll. H. Höne); 1 ♀ (Berlin [ZMHB]); **Tienmuschan, N. W. China, elev. 1157 m [30.35°N, 119.42°E](coll. Rtt. [Reitter]); 6 ♀ 6 ♂ (Praha [NMPC]) 1 ♀ 1 ♂ (Praha, priv.coll [JRC]); country not found: 18.vii.1983 (coll. B. S. Chang); 1 ♀ (Taichung [NMNS]); Baibaia, 23.ix.1925 (coll. Kikuchi); 1 ♀ (Sapporo [SEHU]); British Bootang, Maria Basti (coll. L. Durel); 1 ♂ (Paris [MNHN]); Hte. Birmanie, Mines des Rubis, elev. 1200–2300 m, 1890 (coll. Doherty); 1 ♀ 1 ♂ (Paris [MNHN]); no locality data or date (or illegible); 2 ♂ (New York [AMNH]) 2 ♀ 1 N. *occelatus* holotype [jnr] ♀ (Paris [MNHN]) 1 ♀ (Stockholm [NHRs]); Siao-Lou-Lou-Chan, 1897 (coll. Chasseurs Thibétains); 1 ♂ (Paris [MNHN]); Su-Tchuen, Siao-Lou, 1897; 2 ♀ 1 ♂ (Paris [MNHN]); Su-Tchuen Ya-Tchéou, 1897; 1 ♀ (Paris [MNHN]) **[INDIA]**: Assam, Region de Shillong [26°N, 92°E]; 1 ♀ (Paris [MNHN]); bor, Uttar Orades bor. Joshimath Auli, elev. 2800 m [30.55°N, 79.58°E] 13–17.vii.1994 (coll. M. Snizek); 1 ♀ (Ottawa, priv. coll. [SBPC]) 1 ♀ (Praha, priv.coll [JHC]); Cachemire, Gulmarg, elev. 3800–4600 m [34.55°N, 74.58°E] 4.ix.1979 (coll. G. Ledoux); 1 ♂ (Paris [MNHN]); Central India, Vindhya Hills [24.62°N, 82°E]1921; 1 ♀ 2 ♂ (Paris [MNHN]); **Darj. [Darjeeling] [27.03°N, 88.33°E]; 1 ♀ (Berlin [ZMHB]); **Darjeeling [27.03°N, 88.33°E] 1–30.ix.1949 (coll. Ch. S. Papp); 1 ♂ (Davis [UCDC]); same locality, elev. 1981 m [27.03°N, 88.33°E] 1.vii.1954 (coll. L. Swan); 1 ♀ (San Francisco [CASC]); same locality, elev. 2037 m [27.03°N, 88.27°E] 1–31.x.1987; 2 ♀ (Tokyo [NSMT]); Himalayas, Mussoorie, Landour; 1 ♂ (New York [AMNH]); Inde Anglaise, Pedong, Région de Darjeeling. [27.15°N, 88.62°E]1933 (coll. Chasseurs indigenes); 2 ♀ (Paris [MNHN]); **Khasia Hills [25.58°N, 91.63°E] 1–31.vii.1894; 1 ♀ (Paris [MNHN]); **same locality [25.58°N, 91.63°E] 1–30.vi.1896; 1 ♂ (Paris [MNHN]); Kurseong [26.88°N, 88.28°E]; 1 ♂ (New York [AMNH]); **Mus. Valremberg, Darjeeling [26°45'N, 88°15'E](coll. Lokay); 1 ♀ (Praha [NMPC]); **N.

Bengal, Kalimpong [26.88°N, 88.28°E](coll. T-vuo-Eklund); 1 adult,(Helsinki [MZHF]);
 **Sikkim [27°N, 88°E](coll. H. Fruhstorfer); 1 ♀ (Paris [MNHN]); **Sikkim, Gangtok [27°N,
 88°E] 18.vi.1938 (coll. Dr. Schäfer); 1 ♂ (Berlin [ZMHB]); **Spiti, Pulga (Indes Angl.), elev.
 2825 m [31.98°N, 77.43°E] 1–31.v.1914 (coll. G. Babault); 2 ♀ (Paris [MNHN]); **Spiti,
 Tchary-Djoni (Indes Angl.), 1–30.vi.1914 (coll. G. Babault); 1 ♀ (Paris [MNHN]); W. Bengal,
 Darjeeling Distr. Ghum, , elev. 2000 m [27.02°N, 88.23°E] 13.x.1967 (coll. Gy. Topál); 1 ♀ 1 ♂
 (Budapest [HNHM]); W. Bengal, Darjeeling Distr. Lopch and Ghum, [27.02°N, 88.23°E]
 22.x.1967 (coll. Gy. Topál); 2 ♀ (Budapest [HNHM]); W. Bengal, Darjeeling North Point, elev.
 1500 m [27.02°N, 88.23°E] 23.x.1967 (coll. Gy. Topál); 3 ♀ (Budapest [HNHM]); West Bengal,
 Darjeeling , elev. 1500 m [27.03°N, 88.33°E] 23.vi.1966 (coll. L. & P. Swan); 1 ♀ (San
 Francisco [CASC]); same locality, elev. 2100 m [27.03°N, 88.27°E] 28.ix.1983 (coll. M.
 Tomokuni); 1 ♀ (Tokyo [NSMT]); Darjeeling Dist., same locality, elev. 2130 m [27.03°N,
 88.27°E] 9.xi.1981 (coll. M. Owada); 1 ♂ (Tokyo [NSMT]); same locality, elev. 2100 m
 [27.03°N, 88.27°E] 8.ix.1983 (coll. S. Uéno); 3 ♀ 3 ♂ (Tokyo [NSMT]); Kashmir; 1 ♀
 (Frankfurt [SMFD]); **Cachemire, Pahalgam, Ghandanwari, elev. 2800 m [34.03°N, 75.33°E]
 19.ix.1979 (coll. G. Ledoux); 1 ♀ (Paris [MNHN]); **Gulmarg [34.07°N, 74.423°E] 1–
 30.vii.1956 (coll. J. Sedlacek); 1 ♂ (San Francisco [CASC]); Jammu u., Jammu Banihal Tunnel,
 elev. 2200 m [32.73°N, 74.87°E] 2.vii.1980 (coll. C. Holzschuh); 1 ♀ (Ottawa, priv. coll.
 [SBPC]); Kashmir:, Pahalgam, Himalaya-Hauptkette, elev. 2400 m [34.03°N, 75.33°E] 14–
 20.v.1976 (coll. Martens & Schawaller); 2 ♀ 1 ♂ (Chicago [FMNH]) 2 ♀ 1 ♂ (Frankfurt
 [SMFD]) 1 ♀ (Stuttgart [SMNS]); Kashmir, Pahalgami, elev. 2180 m [34.03°N, 75.33°E] 26–
 28.vii.1978 (coll. P. S. Ward); 1 ♀ 3 ♂ (Ottawa, priv. coll. [SBPC]); Kashmir:, Tangmarg, Pir
 Panjal Gebirge, elev. 2400 m [34.033°N, 74.433°E] 21–25.v.1976 (coll. Martens & Schawaller);
 1 ♀ (Chicago [FMNH]); same locality, elev. 2600 m, 21–25.v.1976 (coll. Martens & Schawaller);
 1 ♀ 2 ♂ (Frankfurt [SMFD]); Mugu Dist., Jhari, Karnali Zone, elev. 2450 m [29.58°N, 84.17°E]
 24.ix.1981 (coll. S. Uéno); 1 ♀ (Tokyo [NSMT]); **JAPAN**:; 1 ♂ (Paris [MNHN]) [Nansei Isles],
 Amami-Ooshima [Amami-Ôshima Is.], Kinsakubaru [28.27°N, 129.35°E] 30.vi.1984 (coll. M.
 Ohara); 1 ♀ (Otaru [MOC]); ****[Kagoshima pref.], Mt. Yuidake, Amami[oshima] Is. [Amami-
 Ôshima Is.] [28.183°N, 129.32°E] 3.ix.1983 (coll. R. Noda); 3 ♀ (Tokyo [NSMT]);
 **Kagoshima pref., Mt. Yuidake, Amamioshima Is. [Amami-Ôshima Is.] [28.183°N, 129.32°E]
 14.v.1983 (coll. S. Nomura); 2 ♀ 1 ♂ (Lawrence [SEMC]) 3 ♀ 4 ♂ (Tokyo [NSMT]);
 **Kagoshima Pref., Ryukyu, Boma, Tokunoshima Is. [Tokuno-shima Is.] [27.8°N, 128.9°E]
 3.xi.1995 (coll. M. Owada); 1 ♀ (Tokyo [NSMT]); **Ryukyu, Amami Oshima Is., Mt. Yuidake
 [28.76°N, 129.35°E] 9.ix.1998 (coll. K. Araya); 1 DNA voucher 09 ♂ 1 DNA voucher 10 ♂ 1

DNA voucher 11 ♂ (Calgary [DSSC]); **Ryukyu, Shirase Riv. Gushikawa vill., Kume-jima Isl. [26.35°N, 127.8°E] 16.iii.1998 (coll. M. Maruyama); 1 DNA voucher 01 adult, (Calgary [DSSC]); ****Yoma, Is. Okinawajima, Ryu-Kyus [26°42'N, 128°11'E] 24.iii.1964 (coll. Y. Kurosawa); 1 ♀ (Tokyo [NSMT]); Tokunoshima Island, Mt. Amagi [27°48'N, 128°59'E] 6–8.xi.1998 (coll. H. Sugaya); 12 ♀ 27 ♂ (Calgary [DSSC]); LAOS: Champassak Prov., Dong Hua Xao NBCA, 2 km S of Bah Nong Luang., bank of Touay-Guai stream, elev. 800 m, 15°4'N, 106°13'E, 1–5.iv.1998 (coll. O. Merkl & G. Csorba); 4 ♀ 4 ♂ (Budapest [HNHM]); Umg. Vietiane, 1.iii.–30.vi.1963; 1 ♀ (München [ZSMC]); **MALAYSIA**: Pahang, Cameron Highlands Mt. Brinchang [4.52°N, 101.38°E] 1–9.i.1959 (coll. L. W. Quate); 1 ♀ (Honolulu [BPBM]); Pahang, Cameron Highlands Parit Falls, degraded rainforest [4.48°N, 101.38°E] 27.iii.1995 (coll. O. Merkl); 2 ♀ (Budapest [HNHM]) 1 ♀ (Stuttgart [SMNS]); Pahang, Cameron Highlands Tanah Rata edge of degraded rainforest [4.47°N, 101.38°E] 21.iii.–2.iv.1995 (coll. O. Merkl); 1 ♀ (Budapest [HNHM]); Pahang Tanah Rata, elev. 1600 m [4.47°N, 101.38°E] 30.i.2000 (coll. Jan Horák); 1 DNA voucher 08 ♀ (Calgary [DSSC]); Tanah Rata [4.47°N, 101.38°E] 1–31.v.1987 (coll. B. Mdnár); 1 ♂ (Budapest [HNHM]); Tanah Rata Cameron Highland, elev. 1450 m [4.47°N, 101.38°E] 17.iii.1988 (coll. G. Hangay); 1 ♀ (Budapest [HNHM]); W-Malaysia : Perak Cameron Highlands [4.47°N, 101.38°E] 1–31.i.1985 (coll. Wong); 5 ♀ 2 ♂ (Stuttgart [SMNS]); West Malaysia, Pahang, Cameron Highland, Tanah Rata, Gunung Jascar, elev. 1400–1500 m [4.47°N, 101.38°E] 20–25.i.1995 (coll. S. Becvar j. & s.); 1 ♀ (Praha, priv.coll [JRC]); Cameron Highland, Tanah Rata [4.47°N, 101.38°E] 22.iv.2000 (coll. M. Maruyama); 1 DNA voucher 07 ♀ 1 DNA voucher 06 ♀ 1 DNA voucher 13 ♀ 1 DNA voucher 12 ♀ (Calgary [DSSC]); Pahang, Gunonh, Brinchang, elev. 1700 m [4.52°N, 101.38°E] 7–9.iix.1985 (coll. M. Nishikawa); 4 ♀ 4 ♂ (Ebina [MNC] Nishikawa private coll); Mt. Brinchang, 17.v.1963 (coll. H. E. McClure); 1 ♀ (Ottawa, priv. coll. [SBPC]); same locality, 19.v.1963 (coll. H. E. McClure); 1 ♂ (Ottawa, priv. coll. [SBPC]); Sarawak, Semongok, 9–16.i.1978 (coll. B. Bendell); 3 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]); **NEPAL**:; 1 holotype ♂ (London [BMNH]); elev. 3383 m, 13.vi.1967; 1 ♂ (Ottawa [CNCI]); 160 Mustang Dist., s. Lethe, alte Flußterrasse offenes Brachland, Gebüsch, elev. 2400 m, 1.v.1980 (coll. Martens & Ausobsky); 6 ♀ 3 ♂ (Frankfurt [SMFD]) 1 ♀ (Stuttgart [SMNS]); 412 Sankhua Sabha Distr., Arum Valley betw. Mure and Hurure, mixed broad-leaved forest, elev. 2050–2150 m, 9–17.vi.1988 (coll. Martens & Schawaller); 1 ♂ (Stuttgart [SMNS]); Annapurna Himal, 1km NW Chitre, elev. 2300 m, 28°25.5'N, 83°41'E, 23.vii.1995 (coll. Gy. M. László & G. Ronkay); 3 ♀ (Budapest [HNHM]); Annapurna Himal, between Ghorepani and Geirigan, elev. 1300–2600 m, 25–27.vii.1995 (coll. Gy. M. László, G. Ronkay & G. Csorba); 5 ♀ 1 ♂ (Budapest [HNHM]); **Aufstieg zum Ting Sang La yon Bikutu, elev. 1000–1900 m, 11–12.iv.1973 (coll.

Jochen Martens); 1 ♀ (Frankfurt [SMFD]); Bagmati, Kalinchok Dana, SW of Tinsang La Sindhu, elev. 2950 m [27.92°N, 85.75°E] 12.xi.1979 (coll. S. Uéno); 1 ♂ (Tokyo [NSMT]); Balephi River, elev. 1067 m, 27.iii.1993 (coll. M.G. Allen); 1 ♀ (London [BMNH]); Central Nepal, 15 km SE Kathmandu, elev. 2100 m [27.7°N, 85.32°E] 20.ii.1995 (coll. A. Wikberg); 1 ♂ (Helsinki [MZHF]); Dolalghat, elev. 900 m [27.65°N, 85.67°E] 7.vii.1983; 3 ♀ (London [BMNH]); Ganesh Himal., 2 km W Thangiet, elev. 2300 m, 28°10'N, 85°17'E, 18.ix.1994 (coll. M. Hreblay & T. Csövári); 1 ♀ (Budapest [HNHM]); Ganesh Himal, 8 km W Godlang, elev. 3050 m, 28°10'N, 85°17'E, 14.x.1995 (coll. L. Peregovits & L. Ronkay); 3 ♀ (Budapest [HNHM]); Ganesh Himal betw. Golzong and Somathang, No. 13, elev. 1500–3600 m, 12–15.vii.1993 (coll. G. Csorba & M. Hreblay); 2 ♀ (Budapest [HNHM]); Ganesh Himal, Nesukharka, 12km S Somdang, elev. 2700 m, 28°9'N, 85°11'E, 21.v.1995 (coll. Gy. Fábrián & L. Ronkay); 1 ♀ (Budapest [HNHM]); Ganesh Himal., Somathang, elev. 3270 m, 15.vi.1993 (coll. M. Hreblay & G. Csorba); 1 ♀ (Budapest [HNHM]); Godavrai, elev. 1550 m [27.6°N, 85.4°E] 2.vi.1984; 3 ♀ 2 ♂ (London [BMNH]); Godwari, elev. 2051 m [27.6°N, 85.4°E] 16–17.ix.1992 (coll. Jenis Ive); 2 ♀ (Praha, priv.coll [JRC]); Jumla Dist., Bohra, Karnali Zone, elev. 2500 m, 19.ix.1981 (coll. S. Uéno); 1 ♀ (Tokyo [NSMT]); Jumla Dist., Jumla, Karnali Zone, elev. 2340 m [29.28°N, 82.17°E] 1.ix.1981 (coll. S. Uéno); 1 ♀ (Tokyo [NSMT]); Kakani, elev. 2070 m [27.82°N, 85.25°E] 3.vii.1983; 2 ♂ (London [BMNH]); same locality, elev. 2070 m [27.82°N, 85.25°E] 8.v.1984; 1 ♀ (London [BMNH]); Kalopani Yakal, elev. 3650 m, 12–13.vi.1973 (coll. Lehmann); 1 ♀ (München [ZSMC]); Kangchenjunga Himal Mts. Phale vill., elev. 3277 m, 27.39°N, 87.55°E, 5.vii.2000 (coll. Jan Schneider); 1 ♀ 2 ♂ (Praha, priv.coll [JSC]); **Kaski Dist., oberhalb Dhampus, Laubwald, elev. 2100 m, 8–10.v.1980 (coll. Martens & Aubsobsky); 1 ♂ (Frankfurt [SMFD]); Kaski District, Begnas Lake, elev. 780 m, 11.x.1994 (coll. G. Csorba & L. Ronkay); 3 ♀ (Budapest [HNHM]); Kathmandu, Godavrai, elev. 1524 m [27.6°N, 85.4°E] 8.vii.1967; 1 ♀ 1 ♂ (Ottawa [CMNC]) 3 ♀ 1 ♂ (Ottawa [CNCI]); Kathmandu Syambu Nath, elev. 1350 m [27.72°N, 85.32°E] 3–5.vii.1983; 1 ♂ (London [BMNH]); Katmandou, elev. 1298 m [27.72°N, 85.32°E] 19.v.1986 (coll. J. Minet, J. Orousset); 1 ♀ (Paris [MNHN]); Kmt. [Katmandu] Pulchauki, elev. 2225 m [27.58°N, 85.4°E] 27.vii.1967; 1 ♂ (Ottawa [CNCI]); same locality, elev. 2438 m [27.58°N, 85.4°E] 14.ii.1967; 1 ♀ (Ottawa [CNCI]); Ktmd. Godavari, elev. 1829 m [27.6°N, 85.4°E] 15.vii.1967; 6 ♀ 1 ♂ (Ottawa [CNCI]); same locality, elev. 1829 m [27.6°N, 85.4°E] 16.vii.1967; 2 ♀ (Ottawa [CNCI]); same locality, elev. 1829 m [27.6°N, 85.4°E] 18.vii.1967; 2 ♂ (Ottawa [CNCI]); same locality, elev. 1829 m [27.6°N, 85.4°E] 19.vii.1967; 2 ♀ 1 ♂ (Ottawa [CNCI]); same locality, elev. 1829 m [27.6°N, 85.4°E] 26.vii.1967; 2 ♂ (Ottawa [CNCI]); same locality, elev. 1829 m [27.6°N, 85.4°E] 27.vii.1967; 1 ♀ (Ottawa

[CNCI]); Ktm. [Katmandu] Godavari, elev. 1829 m [27.6°N, 85.4°E] 14.vii.1967; 1 ♂ (Ottawa [CNCI]); same locality, elev. 1524 m [27.6°N, 85.4°E] 20.ix.1967; 1 ♂ (Ottawa [CNCI]); Mustang Dist., Mtns. 3–4 km SE of Marpha, ca. 9000', elev. 2743 m, 28°44'N, 83°39'E, 11.ix.1999 (coll. S. B. Peck); 1 DNA voucher 02 ♂ (Calgary [DSSC]); Mustang Dist. Mtns. west of Marpha, ca. 4 km SE, elev. 2820 m, 28°44'N, 83°39'E, 12.ix.1999 (coll. S. B. Peck); 1 DNA voucher 05 ♀ (Calgary [DSSC]); Parbat Dist. Ghandrung, Gandaki Zone, elev. 1920 m [29.28°N, 82.17°E] 22.x.1981 (coll. S. Uéno); 1 ♀ (Tokyo [NSMT]); Phaul Chokj(?), elev. 2438 m, 6.ix.1967; 2 ♀ (Ottawa [CNCI]); Phulchoki, elev. 1950 m [27.58°N, 85.4°E] 27.v.1984; 2 ♀ 1 ♂ (London [BMNH]); Prov. Nr. 1 East Pultschuk, elev. 2500 m, 16.vi.1967 (coll. Dierl; Forster; Schacht); 1 ♂ (München [ZSMC]); Resa, lam-Dharan, trekk, 1–31.vii.1984 (coll. P. Ardo); 2 ♀ 1 ♂ (Lund [MZLU]); Solu Khumbu Dist., Mtns east of Lukla, moist cloud forest, elev. 2840–2900 m, 27°41.243'N, 86°44.143'E, 20.ix.1999 (coll. D. S. Sikes); 1 DNA voucher 03 ♀ 1 larva (Calgary [DSSC]); surroundings of Lukla, elev. 2800–4000 m [27.7°N, 86.72°E] 26.vi.–2.vii.1993 (coll. G. Csorba & M. Hreblay); 2 ♀ (Budapest [HNHM]); Tanahoun District, Bimalnager village, elev. 530 m, 28°25.5'N, 83°41'E, 12.x.1995 (coll. C. Csorba & L. Ronkay); 1 ♀ 1 ♂ (Budapest [HNHM]); Taplejung distr., between Dhoban and Helok, elev. 920–1600 m [27.35°N, 87.667°E] 28.iii.–2.iv.1996 (coll. S. Kovács & L. Ronkay); 1 ♀ (Budapest [HNHM]); Thodung, elev. 3100 m [27.6°N, 86.35°E] 3–7.vi.1962 (coll. G. Ebert); 1 ♂ (München [ZSMC]); Chautara Dist., Choche Lekh, elev. 3505 m, 1–31.ix.1983 (coll. Lt. Col. M.G. Allen); 1 ♂ (London [BMNH]); PAKISTAN: Himalaya Mts, Kaghan valley, 20 km NE Balakot Tathabaya, , elev. 2400 m, 34°41'N, 73°25'E, 27.vii.1994 (coll. B. Herczig, Gy. M. László & G. Ronkay); 3 ♀ 6 ♂ (Budapest [HNHM]); Himalaya Mts, Kaghan valley, 7 km S of Kaghan, Khanian villiage, elev. 2500 m, 34°36'N, 73°26'E, 18.v.1998 (coll. Gy. M. László & G. Ronkay); 3 ♀ 1 ♂ (Budapest [HNHM]); Himalaya Mts, Kaghan valley, Tathabaya, , elev. 2200 m, 34°36'N, 73°26'E, 1.v.1998 (coll. Gy. M. László & G. Ronkay); 3 ♀ (Budapest [HNHM]); same locality, elev. 2200 m, 34°36'N, 73°26'E, 16.v.1998 (coll. Gy. M. László & G. Ronkay); 1 ♀ (Budapest [HNHM]); same locality, elev. 2200 m, 34°36'N, 73°26'E, 19.v.1998 (coll. Gy. M. László & G. Ronkay); 4 ♀ 2 ♂ (Budapest [HNHM]); Northwest Frontier Prov., Nethiagali, Baragali Campus, elev. 2350 m, 34°5'N, 73°21'E, 24.vii.1998 (coll. G. Csorba & L. Ronkay); 4 ♀ (Budapest [HNHM]); Northwest Frontier Prov., Tathabaya, elev. 2300 m, 34°36'N, 73°27'E, 9–10.ix.1997 (coll. G. Fabian); 1 ♀ 4 ♂ (Budapest [HNHM]); same locality, elev. 2300 m, 34°36'N, 73°27'E, 7–9.vii.1998 (coll. G. Csorba & L. Ronkay); 3 ♀ 3 ♂ (Budapest [HNHM]); same locality, elev. 2300 m, 34°36'N, 73°27'E, 22–23.vii.1998 (coll. G. Csorba & L. Ronkay); 7 ♀ 9 ♂ (Budapest

[HNHM]); SW- Himalaja Indus-Kohistan Kaghan; Tal Shinu, elev. 1700–2200 m, 34°41'N, 73°25'E, 14–23.vi.1977 (coll. deFreina); 1 ♀ (Stuttgart [SMNS]); Swät Prov., NW Pakistan, Madyan, am Licht, elev. 1400 m, 35°42'N, 71°54'E, 19.vi.–4.vii.1971 (coll. C. Holzschuh); 1 ♀ (Ottawa, priv. coll. [SBPC]); Umg. Shangla, elev. 2400 m, 4.ix.1979 (coll. Heinz); 1 ♀ (Stuttgart [SMNS]); **PHILIPPINES**: Mindoro Is., Mt. Halcon [13.2667°N, 120.9833°E] 4.x.2003 (coll. D. Mohagan); 2 adults (Calgary [DSSC]); same locality [13.2667°N, 120.9833°E] 5.x.2003 (coll. D. Mohagan); 3 adults (Calgary [DSSC]); Central Luzon, near Lucena City, Mt. Banahao [14.0833°N, 121.5167°E] 1–30.iv.2003 (coll. N. Mohagan); 2 adults 1 ♀ 1 ♂ (Calgary [DSSC]) [Luzon], Baguio [14°1'N, 121°35'E](coll. G.G. Haslam); 1 ♀ (USNM); Baguio, Mountain Province [16.42°N, 120.6°E] 1–10.vi.1945 (coll. J. G. Franclemont); 1 *N. benguetensis* paratype [jnr] ♂ (London [BMNH]) 1 ♀ (USNM) 2 *N. benguetensis* paratype [jnr] ♀, 1 *N. benguetensis* holotype [jnr] ♀, 1 *N. benguetensis* paratype [jnr] ♀, 1 *N. benguetensis* allotype [jnr] ♂, 1 *N. benguetensis* paratype [jnr] ♂ (Washington D.C. [USNM]); Benguet, Baguio, elev. 1600 m [16.42°N, 120.6°E] (coll. W. Schultze); 2 ♂ (Dresden [SMTD]); Bontoc Prov., Mt. Data, elev. 1620 m [16°N, 121°E] 30.v.1977 (coll. Y. Kurosawa); 1 ♀ (Tokyo [NSMT]); Kalinga-ap.Abra pr. boundary: Cordillera Centr. around Pass, elev. 1500–1700 m, 17°30'N, 121°0'E, 26–28.iii.2000 (coll. L. Dembicky); 1 ♀ (Praha, priv.coll [JSC]); **Mountain Prov., Abatan, Buguias 60 km S of Bontoc, elev. 1800–2000 m [17.12°N, 120.97°E] 29.v.1964; 1 ♀ (Honolulu [BPBM]); Mountain Prov., Barlig, elev. 1500 m [16°N, 121°E] 17.vii.1985 (coll. M. Owada); 1 ♀ (Tokyo [NSMT]); Mountain Prov., Mt. Data, elev. 2240 m [16°N, 121°E] 24.vii.1985 (coll. M. Owada); 5 ♀ 4 ♂ (Tokyo [NSMT]); Mt. Puguis, Mountain Prov., elev. 1620 m [16°N, 121°E] 17.vi.1977 (coll. S. Sakane); 1 ♀ 1 ♂ (Tokyo [NSMT]); Mt. Santo Tomas 13 km SW Baguio, elev. 2134 m [16.42°N, 120.6°E] 7–12.i.1966 (coll. D. Davis); 1 ♂ (Washington D.C. [USNM]); Mtn. Prov., Barlig, elev. 1650 m [17.05°N, 121.09°E] 14–15.xi.1997 (coll. Mey, Ebert, NuB); 2 ♀ 1 ♂ (Berlin [ZMHB]); **N. Luzon, elev. 1524–1828 m [16°N, 121°E]1894 (coll. Whitehead); 1 ♂ (Paris [MNHN]); N. Luzon Ifugao, Babaue vic. 20 km N Lagawe, Sekundärwald / Reisfld., 16°54'N, 121°6'E, 22.ix.–16.x.1988 (coll. Cerny & Schintlmeister); 1 ♀ (Berlin [ZMHB]); P.I. Manila [14.62°N, 120.97°E](coll. W. Schultze.); 1 ♂ (Dresden [SMTD]); **[Mindanao], Zamboanga (Phil. Islds.) [6.92°N, 122.08°E]; 1 ♀ (Cambridge [MCZC]); Pallawan, Mantalingajan, Tagabung, elev. 1150 m [8.83°N, 117.72°E] 20.ix.1961; 1 ♀ (Kobenhavn [ZMUC]); same locality, elev. 1150 m [8.83°N, 117.72°E] 20.ix.1961; 1 ♂ (Kobenhavn [ZMUC]); **TAIWAN**: 1–30.ix.1936 (coll. Y. Miwa); 1 ♂ (Taichung Hsien [TARI]); Arisan, elev. 2232 m [23.53°N, 120.8°E] 2–20.x.1918 (coll. J. Sonan, M. Yoshino); 1 ♀ (Taichung Hsien [TARI]); same locality, elev. 2232 m [23.53°N, 120.8°E] 25.v.1933 (coll. M. Chujo); 1 ♀

(Taichung Hsien [TARI]); **Ch'i-chia-wan ch'i, Formosa, N. of Shikayau, 20.vi.1961 (coll. S. Ueno); 1 ♂ (Tokyo [NSMT]); Fenchihu, elev. 1400 m [24°36'N, 121°50'E] 20.v.1977 (coll. Klapperich); 1 ♀ (Stuttgart [SMNS]); **Formosa, elev. 2744 m [23.5°N, 121°E](coll. T. Kano); 1 ♀ 2 ♂ (Tokyo [NSMT]); Formosa, Karenko, 20.vii.–4.ix.1919 (coll. T. Okuni, J. Sonan, K. Miy, M. Yosh.); 1 ♀ (Sapporo [SEHU]) 1 ♂ (Taichung Hsien [TARI]); Ilan, Fu Shan Bot. Garden, LTER site, elev. 700 m, 24°45'N, 121°35'E, 8–9.iv.1997 (coll. L. Peregovits & A. Kun); 1 holotype ♀ (Budapest [HNHM]); Ilan, Peiheng rd. 84K [24°46'N, 121°45'E] 24–27.iv.1995 (coll. M.L.Chan & W. T. Yang); 1 ♀ 1 ♂ (Taichung [NMNS]); Mt. Rara, 24.vii.1938 (coll. N. Ikeda); 1 ♂ (Taichung Hsien [TARI]); **Mt. Tatumshan, Formosa [25°11'N, 121°31'E] 6.ix.1976; 1 ♂ (Tokyo [NSMT]); **Rozan Spa, C. Formosa, 14.vi.1975 (coll. K. Uéda); 1 ♂ (Tokyo [NSMT]); **Sengpei, Formosa, 4.v.1976; 1 ♂ (Tokyo [NSMT]); Sozan, 10.x.1939 (coll. J. Sonan); 1 ♀ (Taichung Hsien [TARI]); Taiheizan [23.5°N, 121°E] 7.vii.1934 (coll. Formoss); 1 ♀ (San Francisco [CASC]); same locality [23.5°N, 121°E] 1–31.v.1935 (coll. Y. Miwa); 2 ♀ (Taichung Hsien [TARI]); **Taihoku, 1.vii.1935 (coll. J. Sonan); 1 ♀ (Taichung Hsien [TARI]); Taikoku, 17.ii.1917 (coll. K. Miyake); 1 ♂ (Taichung Hsien [TARI]); same locality, 4.ix.1934 (coll. K. Sawada); 1 ♀ (Taichung Hsien [TARI]); Taipei Co. Wulai, elev. 400 m [25.02°N, 121.45°E] 1–2.iii.2000 (coll. W. Speidel); 1 ♀ 1 ♂ (Berlin [ZMHB]); Taoyuan, Dakwan-Shan, elev. 1400 m [25°8'N, 121°28'E] 6.iii.2000 (coll. W. Speidel); 2 ♀ (Berlin [ZMHB]); **Wu Lai [24.87°N, 121.55°E] 7.iv.1958 (coll. S. Kinner); 1 ♀ (Honolulu [BPBM]); Hualien Prov., 10 km NE Tienchih, elev. 2100 m, 24°4'N, 121°20'E, 23.v.1995 (coll. M. Hreblay & P. Stéger); 1 ♀ (Stuttgart [SMNS]); Kaohsiung, 26 km SE Taoyuah, elev. 1370 m, 23°17'N, 120°52'E, 19.iii.1996 (coll. T. Csövári & P. Stéger); 1 ♂ (Budapest [HNHM]); Tengchih [22°59'N, 120°45'E] 20–25.iii.1989 (coll. C. S. Lin); 1 ♀ (Taichung [NMNS]); Nantou, Hsien, Meifeng, elev. 2130 m [24°5'N, 121°10'E] 10–17.vii.1993 (coll. A. Smetana); 1 ♀ (Praha, priv.coll [JRC]); Mei-feng, 30 km S Tayuling, elev. 2200 m [24°5'N, 121°10'E] 1–8.vi.1980 (coll. D. R. Davis); 9 ♀ 6 ♂ (Ottawa, priv. coll. [SBPC]); **Meifeng, elev. 2150 m [24°5'N, 121°10'E] 3.v.1983 (coll. H. Townes); 2 ♀ 3 ♂ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 2150 m [24°5'N, 121°10'E] 10.v.1983 (coll. H. Townes); 1 ♀ 3 ♂ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 2150 m [24°5'N, 121°10'E] 15–29.v.1983 (coll. H. Townes); 1 ♀ 5 ♂ (Ottawa, priv. coll. [SBPC]); same locality [24°5'N, 121°10'E] 14–16.v.1990 (coll. C. S. Lin); 2 ♂ (Taichung [NMNS]); same locality [24°5'N, 121°10'E] 24.iv.1991 (coll. C. S. Sun); 1 ♂ (Taichung [NMNS]); same locality [24°5'N, 121°10'E] 20–21.vi.1991 (coll. C. S. Lin); 1 ♂ (Taichung [NMNS]); same locality [24°5'N, 121°10'E] 27–28.ix.1991 (coll. C. S. Lin); 1 ♂ (Taichung

[NMNS]); same locality [24°5'N, 121°10'E] 24.ix.1991 (coll. C. S. Lin); 1 ♂ (Taichung [NMNS]); same locality, elev. 2250 m, 24°5'N, 121°10'E, 25.ix.1999 (coll. G. Csorba & B. Herczig); 1 ♀ (Budapest [HNHM]); Shuili [23°48'N, 120°51'E] 31.vii.1990 (coll. C. M. Lin); 1 ♀ (Taichung [NMNS]); Tayuling, elev. 2500 m [24°11'N, 121°18'E] 9–18.vi.1980 (coll. D. R. Davis); 2 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); **Wushe, elev. 1150 m [24°37'N, 121°0'E] 16–23.iii.1983 (coll. H. & M. Townes); 2 ♀ 4 ♂ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 1150 m [24°37'N, 121°0'E] 2.iv.1983 (coll. Henry Townes); 1 ♀ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 1150 m [24°37'N, 121°0'E] 7.iv.1983 (coll. H. Townes); 1 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 1150 m [24°37'N, 121°0'E] 29.iv.1983 (coll. H. Townes); 1 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 1150 m [24°37'N, 121°0'E] 3.v.1983 (coll. Henry Townes); 1 ♂ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 1150 m [24°37'N, 121°0'E] 10.v.1983 (coll. H. Townes); 1 ♀ (Ottawa, priv. coll. [SBPC]); **same locality, elev. 1150 m [24°37'N, 121°0'E] 29.v.1983 (coll. H. Townes); 1 ♂ (Ottawa, priv. coll. [SBPC]); same locality [24°37'N, 121°0'E] 22–23.iii.1993 (coll. W. T. Yang); 1 ♀ (Taichung [NMNS]); Sichiao, Chiayi [Chia Yi Hsien] [23°30'N, 120°30'E] 10–11.vi.1988 (coll. K. Masumoto); 3 ♀ 3 ♂ (Ebina [MNC] Nishikawa private coll); Taitung, Hsien Hsinkangshan above Chengkang, elev. 800 m, 17–22.iv.1998 (coll. Lise Robillard); 1 ♀ (Praha [JSCC]);

THAILAND: Chiang Mai Prov., Doi Inthanon, , elev. 2200 m [18.58°N, 98.48°E] 5.iv.1989 (coll. M. Nishikawa); 3 ♀ (Ebina [MNC] Nishikawa private coll); Chiang Mai Prov., Doi Inthanon, summit, elev. 2500 m [18.58°N, 98.48°E] 10.vi.1981; 1 ♂ (Kobenhavn [ZMUC]); **Doi Inthanon, elev. 2500 m [18.58°N, 98.48°E] 24.iii.1988 (coll. K. Masumoto); 1 ♀ (Ebina [MNC] Nishikawa private coll); **same locality [18.58°N, 98.48°E] 24.iii.1988 (coll. K. Masumoto); 1 ♂ (Ebina [MNC] Nishikawa private coll); Doi Inthanon, Chiang Mai, 18°32'N, 98°32'E, 27.x.1991 (coll. Y. Manit); 2 ♂ (Ebina [MNC] Nishikawa private coll); **Doi Inthanon, Chiang Mai Pr., elev. 2500 m [18.58°N, 98.48°E] 30.vii.–3.ix.1988 (coll. K. Masumoto); 2 ♀ (Ebina [MNC] Nishikawa private coll); Krabi Prov., Southern Thailand, Ao Son (Son Bay), 21.vi.1987 (coll. A. & P. Colvin); 1 ♀ (Davis [UCDC]); N. Thailand, Chlang Mat, 1–30.ix.1996 (coll. Wong Tet Fatt); 2 ♀ 2 ♂ (Budapest [HNHM]); Nan, Do Phu Ka N.P. 34.4 km from HQ, elev. 1685 m, 24.xii.1991 (coll. I. Kitching); 1 ♀ (London [BMNH]); NW THAILAND, Doi Inthanon, Bang Khun Klang, elev. 1200 m, 18°32'N, 98°32'E, 9–16.i.1990 (coll. Malicky & Chantaramongkot); 1 ♂ (Wien [NHMW]); TV relay station 7 km north of Ranong, elev. 300–500 m, 28–29.xi.1991 (coll. I. Kitching); 1 ♀ (London [BMNH]); **VIETNAM:** Loa Cal: Sapa Muong Hoa Ho River, UV light, 6.v.1995 (coll. D. Currie, B. Hubley, J. Swann.); 1 ♀ (Royal Museum of

Ontario [ROM]); Mt. Lang Bian, elev. 1500–2000 m [12.08°N, 108.5°E] 19.v.–8.vi.1961 (coll. N. R. Spencer); 1 ♀ 1 ♂ (Honolulu [BPBM]); N. Vietnam, Fan-Si-Pan, elev. 2534 m [22.25°N, 103.83°E] 1–31.vii.1994 (coll. Sinigev); 2 ♀ 3 ♂ (Praha, priv.coll [JHC]); S. Vietnam, 12km N Dalat, Lang Bian, elev. 1500 m [12.08°N, 108.5°E] 28–30.iv.1994 (coll. Pacholatko & Dembicky); 3 ♀ (Wien [NHMW]); **Tonkin, Montes Manson [Bac Phan], elev. 609–914 m [22°N, 105°E](coll. H. Fruhstorfer); 1 ♀ 1 ♂ (Paris [MNHN]); Bac Thai Prov., Quang Chu, elev. 150 m, 2–3.xii.1993 (coll. Bankovics & Csorba); 1 ♀ (Budapest [HNHM]); Lam Dong Prov., Da Lat, , 15.x.1988 (coll. S. Mahunka & T. Vásárhelyi); 1 ♀ (Budapest [HNHM]); Lao Cai Prov., 14 km NW Sa Pa., Fan-si-pan Mts., elev. 1900–2000 m, 22°20.9'N, 103°46.06'E, 24–27.i.1999 (coll. L. Peregovits, G. L. Ronkay); 2 ♀ (Budapest [HNHM]); 16km W of Sa Pa, elev. 1800 m [22.35°N, 103.87°E] 17.iii.1998 (coll. L. Peregovits, G. L. Ronkay); 2 ♀ (Budapest [HNHM]); Sa Pa, [22.35°N, 103.87°E] 15.xii.1993 (coll. Bankovics & Csorba); 1 ♀ (Budapest [HNHM]); Sa Pa, elev. 1500 m [22.35°N, 103.87°E] 9.x.1994 (coll. M. Satô); 1 ♀ (Calgary [DSSC]); Sa Pa, , elev. 1500 m [22.35°N, 103.87°E] 13.x.1994 (coll. S. Uéno); 1 ♂ (Tokyo [NSMT]); same locality, elev. 1690 m, 22°20'N, 103°47'E, 24–25.vii.1998 (coll. A. Kun); 1 ♀ (Budapest [HNHM]); Viuh Phu Prov., Tam Dao, elev. 900 m [21.53°N, 105.58°E] 26.v.1985 (coll. L. Medvedev); 1 ♀ (Stuttgart [SMNS]); **same locality [21.53°N, 105.58°E] 2–11.vi.1985 (coll. S. Kuban); 1 ♂ (Ottawa, priv. coll. [SBPC]); same locality [21.53°N, 105.58°E] 27.v.–2.vi.1986 (coll. J. Rybníček); 1 ♀ (Praha, priv.coll [JRC]); same locality [21.53°N, 105.58°E] 1–28.ii.1990 (coll. A. Csorba); 2 ♀ 1 ♂ (Budapest [HNHM]); **same locality, elev. 900 m [21.53°N, 105.58°E] 16–23.v.1991 (coll. Strand Jan); 1 ♀ (Praha, priv.coll [JRC]); **same locality [21.53°N, 105.58°E] 25.xi.1991 (coll. S. Murlin); 1 ♀ (Praha, priv.coll [JRC]).

Literature or database records. CHINA: Gansu, Luqu, elev. 2500 m [34.6°N, 102.5°E] 11.vii.1990 (Růžička & Schneider 1996); S: Venxian env., 18–26.vi.1995 (coll. Benes) (Růžička & Schneider 1996); CHINA: Guizhou, NE: 20 km NW of Jiangkou, Fanjing Shan, Kuai-chang [27.72°N, 108.9°E] 27.v.–3.vi.1995 (coll. E. Jendek & O. Sausa) (Růžička & Schneider 1996); CHINA: Shaanxi, Hui Shan, 28.vii.1990 (Růžička & Schneider 1996); CHINA: Sichuan, Juilonggou env., Bayi, 70km W of Chengdu [30°N, 104°E] 23–27.vi.1993 (Růžička & Schneider 1996); Kangding, elev. 3000 m [30°5'N, 102°4'E] 23–27.vii.1995 (Růžička & Schneider 1996); CHINA: Yunnan, 35 km N of Lijiang, Heishui, 1–19.vii.1992 (Růžička & Schneider 1996); same locality, 18.vi.–4.vii.1993 (Růžička & Schneider 1996); Dali, 16.vi.1993 (Růžička & Schneider 1996); Jizu Shan Mts., elev. 2800 m [25.58°N, 100.21°E] 30.v.–3.vi.1993 (Růžička & Schneider 1996); Weibao Shan Mts., W. slope, elev. 2000–2800 m, 25–28.vi.1992 (Růžička & Schneider 1996); Yulong Shan Mts., elev. 2900–3500 m, 27°1'N, 100°12'E, 24–26.v.1993 (Růžička &

Schneider 1996); INDIA: Meghalaya, Mawphlang [25.5°N, 91.25°E] 25.iv.1995 (coll. C. Werner) (Růžička, Hava & Schneider 2000); LAOS: Bolikhamsai, Ban Nape; Kaew Nua Pass, elev. 600 m, 18°22.3'N, 105°9.1'E, 18.iv.–1.v.1998 (coll. E. Jendek & O Sausa) (Růžička, Hava & Schneider 2000).

Nicrophorus podagricus Portevin, 1920: 400

Material examined

63 ♂, 72 ♀, 2 sex undetermined: country not found: no locality data, 12.xii.1894; 1 ♀ 1 ♂ (Cambridge [MCZC]); EAST MALAYSIA: North Borneo, Sabah, Mt. Trus Madi, elev. 1200 m [5.3333°N, 117.1667°E] 1–30.iv.2003; 2 adults (Calgary [DSSC]) [MALAYSIA]: Borneo; 1 ♀ 1 ♂ (Frankfurt [SMFD]); **Kina Balu [5.98°N, 116.07°E](coll. Waterstradt); 2 paralectotype ♀ 3 paralectotype ♂ 1 *N. nigrifrons* holotype [jnr] ♂ (Paris [MNHN]); Sabah, Mt. Alab, Tambunan, elev. 1800 m [5.85°N, 116.37°E](coll. Bourglat); 1 ♂ (Paris [MNHN]); **Sarawak: 4th Division Gn. Mulu Np., elev. 800–1700 m [4.05°N, 114.93°E] 3.v.1978 (coll. I. Hanski); 1 ♀ (London [BMNH]); **same locality, elev. 1700 m [4.05°N, 114.93°E] 3.v.1978 (coll. I. Hanski); 1 ♀ 1 ♂ (London [BMNH]); **same locality [4.05°N, 114.93°E] 3.v.1978 (coll. I. Hanski); 1 ♀ 2 ♂ (London [BMNH]); **Sarawak: Gunong Mulu Nat. Park, elev. 1780 m [4.05°N, 114.93°E] 1.i.1977; 31.i.1978 (coll. J. D. Holloway et al.); 1 ♂ (London [BMNH]); **Borneo; 3 ♂ (Budapest [HNHM]) 5 ♀ 6 ♂ (Kobenhavn [ZMUC]) 1 paralectotype ♀ 1 lectotype ♂ (Paris [MNHN]) 1 ♀ (Praha [NMPC]) 4 ♀ (Washington D.C. [USNM]); **Kalimantan, Kota Kinabalu, Gunung Emas, Nat. Park Rafflesia [5.98°N, 116.07°E] 6–10.ii.1999 (coll. Mracek); 1 ♂ (Praha, priv.coll [JSC]); **Sabah: 50 km E Kota Kinabalu Crocker Mt, Gg. Emas [6.2°N, 116.78°E] 16–27.iv.1993 (coll. Strba & Jenis); 4 ♀ 2 ♂ (Wien [NHMW]); Sabah: Borneo Is., Kiau Gap, elev. 1780 m [6.03°N, 116.48°E] 9–16.ii.1987 (coll. K. Maruyama); 1 ♀ 1 ♂ (Calgary [DSSC]) 1 ♀ 1 ♂ (Ebina [MNC] Nishikawa private coll); Sabah: Borneo Is., Kundasung, elev. 1300 m, 5.ix.1985 (coll. M. Nishikawa); 4 ♀ 4 ♂ (Ebina [MNC] Nishikawa private coll); **Sabah: Borneo Is., Kundasung Ranau, 1–31.iii.1983 (coll. S. Nagai); 1 ♂ (Tokyo [NSMT]); **[Sabah]: British N. Borneo Tenompok, Jesselton 30 mi. E., elev. 1460 m [5.98°N, 116.07°E] 26–31.i.1959 (coll. T. C. Maa); 1 ♂ (Honolulu [BPBM]); Sabah, Crocker Mt, Gunong Emas, elev. 500–1900 m [5.66°N, 116.33°E] 6–21.v.1995 (coll. Jiri Storlarczyk); 1 ♀ 1 ♂ (Praha, priv.coll [JRC]); Sabah, Crocker Mt, Gunong Emas env. [5.66°N, 116.33°E] 15–27.iv.1993 (coll. Jenis & Strba); 1 ♀ 1 ♂ (Praha, priv.coll [JRC]); Sabah, Crocker Range Nat. Prk. ca. km 52 of Rd. Kota Kunabalu-Tambunan env. Gunung Emas Highland Resort, elev. 1500–1700 m [5.66°N,

116.33°E] 6–18.vii.1996 (coll. a.s.l.); 2 ♂ (Calgary [DSSC]) 6 ♀ 2 ♂ (Wien [NHMW]); Sabah, Gunung Emas, elev. 1600 m [5.66°N, 116.33°E] 28.ix.1998 (coll. K. Araya); 1 DNA voucher 03 ♀ 1 DNA voucher 04 ♀ 1 ♂ 1 DNA voucher 01 ♂ 1 DNA voucher 02 ♂ (Calgary [DSSC]); Sabah, Gunung Emas, 42 km E from Kota, Kinabalu [5.98°N, 116.07°E] 21.iii.1996 (coll. Linda); 1 ♂ (Praha, priv.coll [JSC]); **[Sabah]:, Kina Balu [5.98°N, 116.07°E](coll. Whitehead); 1 ♀ (London [BMNH]); ****[Sabah]: Kinabalu [5.98°N, 116.07°E]; 1 ♂ (Amsterdam [ZMAN]) 4 ♀ 2 ♂ (Budapest [HNHM]); **[Sabah:] Kinabalu [5.98°N, 116.07°E]; 1 ♀ (Lund [MZLU]); **Sabah: Kinabalu N. P., Headquarters, elev. 1558 m [5.98°N, 116.07°E] 25.iv.1987 (coll. D. E. Bright); 1 ♀ (Washington D.C. [USNM]); **same locality, elev. 1558 m [5.98°N, 116.07°E] 16–18.v.1987 (coll. D. E. Bright); 2 ♀ 1 ♂ (Washington D.C. [USNM]); **Sabah: Kinabalu N.P.:headquarters , elev. 1500–1600 m [5.98°N, 116.07°E] 11–15.xi.1996 (coll. W. Schawaller); 1 ♂ (Stuttgart [SMNS]); **Sabah: Kinabalu Nat. Park, Headquarters area, elev. 1560 m [6.08°N, 116.55°E] 19.xi.1989 (coll. M. J. & J. P. Duffels); 1 ♂ (Amsterdam [ZMAN]); **Sabah, Kinabalu Nat. Pk., elev. 1555 m [6.15°N, 116.65°E] 20.iii.1975 (coll. E. & I. Munroe); 1 ♀ (Washington D.C. [USNM]); ****Sabah: Kinabalu National Park, Headquarters area, elev. 1560 m [6.08°N, 116.55°E] 7–10.ix.1983 (coll. G. F. Hevel & W. E. Steiner); 2 ♀ 2 ♂ (Washington D.C. [USNM]); **Sabah: Mt. Kinabalu [6.08°N, 116.55°E] 23.vi.1979 (coll. H. Matsuda); 1 ♀ (Tokyo [NSMT]); **same locality [6.08°N, 116.55°E] 16.ix.1997; 2 ♀ 1 ♂ (Calgary [DSSC]); **Sabah: Mt. Kinabalu headquarters , elev. 1560 m [6.08°N, 116.55°E] 28.iv.1982 (coll. M. Horak); 1 ♂ (Stuttgart [SMNS]); **Sabah: Mt. Kinabalu, W. Mesilau River [6.08°N, 116.55°E] 6.ii.1964 (coll. J. Smart); 2 ♀ (London [BMNH]); **[Sabah]: N. Borneo, Kina Balu [5.98°N, 116.07°E]; 6 ♀ 2 ♂ (Paris [MNHN]) [Sabah]: N. Borneo, Mt. Kinabalu [6.08°N, 116.55°E] 9.v.1979 (coll. N. Nishikawa); 1 ♂ (Tokyo [NSMT]); same locality [6.08°N, 116.55°E] 21.v.1979; 1 ♂ (Tokyo [NSMT]); **Sabah: N. Borneo, Mt. Kinabalu, Bembangan River, elev. 1524 m, 20.ii.–5.iii.1964 (coll. S. Kueh); 1 ♀ (London [BMNH]) [Sabah]: N. Borneo, Mt. Kinabalu, Mesilau [6.08°N, 116.55°E] 1983 (coll. S. Nagai); 1 ♂ (Tokyo [NSMT]) [Sabah:] N. O. Borneo , elev. 987 m; 2 ♀ (Dresden [SMTD]); Sabah: Nord Borneo Mont Kina Balu [6.08°N, 116.55°E] 5.ix.1903 (coll. John Waterstradt); 8 ♀ 5 ♂ (Paris [MNHN]); **Sabah: park headquarters near Mt. Kinabalu, elev. 1700 m [6.08°N, 116.55°E] 23.iii.1979 (coll. Shinji Nagai); 1 ♂ (Tokyo [NSMT]).

Nicrophorus quadripunctatus Kraatz, 1877: 101*Material examined*

232 ♂, 366 ♀, 4 sex undetermined: [**CHINA**]: [Heilongjiang Prov.], Kaolingze, Manchukuo [42°N, 126°E] 2.vii.1940; 1 ♀ (USNM); Shang-zhi County: Mt. Mao-er-shan, elev. 2200 m [45.2°N, 127.5°E] 19.vi.1988; 1 ♂ (Tianjin [NKUM]); **[Jiangsu prov.], Kiukiang [Jiujiang] [29.7°N, 115.9°E] 1–30.vi.1887 (coll. A. E. Pratt); 1 ♀ 1 ♂ (Paris [MNHN]); country not found: [Anikin Kordon r. Majxe Prim. kr.]? (coll. [E. Regelh?]); 1 ♀ (Ottawa, priv. coll. [SBPC]); Ertiantianze, 19.ix.1931; 1 ♀ (Paris [MNHN]); Kaisa; 1 ♂ (London [BMNH]); no locality data or date (or illegible); 2 ♀ (Frankfurt [SMFD]) 1 ♂ (Ottawa, priv. coll. [SBPC]) 1 ♀ 1 ♂ (Paris [MNHN]) [Ussuri reg] [Suputinskij 'apov. Primor.]?, 7.ix.1969 (coll. [KryOakovskú?]); 1 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); erroneous or doubtful label: "INDONESIA:Celebes" probably mislabelled., elev. 309 m; 1 ♀ (London [BMNH]); **JAPAN**: (coll. G. Lewis); 6 ♀ 2 ♂ (London [BMNH]); 1 ♀ (London [BMNH]) (coll. G. Lewis); 1 ♂ (London [BMNH]); 2 ♂ (Milwaukee [MCPM]) (coll. Harrington); 1 ♂ (Ottawa [CNCI]); 1896 (coll. Lord Dormer); 1 ♀ (London [BMNH]); Higo. (coll. G. Lewis); 1 ♂ (London [BMNH]); Orurna ?, 2.vii.1926 (coll. E. Suenson); 1 ♀ (Kobenhavn [ZMUC]); Uatushima? Uiyagi?, 26.x.1973; 1 ♀ (Budapest [HNHM]); same locality, 26.x.1975; 2 ♂ (Budapest [HNHM]); Waton? Uiyagi?, 24.ix.1977; 1 ♂ (Budapest [HNHM]); Hokkaido, Apoi [42.1°N, 143.03°E] 5–8.ix.1966 (coll. A. Mutuura); 5 ♀ 1 ♂ (Ottawa [CNCI]); ****Gumma Pref., Hoshi-onsen [43.7°N, 141.7°E] 12.ix.1954 (coll. A. Habu); 1 ♂ (Ibaraki [ITLJ]); ****Gumma Pref., Tokura [43.7°N, 141.7°E] 21.ix.1955 (coll. K. Sadanaga); 1 ♀ 1 ♂ (Ibaraki [ITLJ]); ****same locality [43.7°N, 141.7°E] 22.ix.1955 (coll. I. Hattori); 1 ♂ (Ibaraki [ITLJ]); ****Hakodate [41.76°N, 140.7°E] 1–31.ix.1886 (coll. Leech); 3 ♀ 2 ♂ (Paris [MNHN]); **same locality [41.73°N, 140.7°E] 1897 (coll. R. P. Taurie, H. Trim); 1 ♀ (Paris [MNHN]); Hanganate (LT) Niikappu-cho Hidaka dist. [42.35°N, 142.32°E] 21–23.ix.1995 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); **Jesso [44°N, 143°E]; 1 ♀ (Frankfurt [SMFD]); Katsurazawa-ko (LT), Mikasa C. Sorachi dist. [43.25°N, 141.95°E] 31.ix.1995 (coll. S. Nomura); 1 ♂ (Tokyo [NSMT]); **Maruyama, 1.ix.1956 (coll. T. Okutani); 1 ♂ (Ibaraki [ITLJ]); ** (Mt. Daisengen), Oshima, elev. 300 m [41.58°N, 140.15°E] 24.ix.1986 (coll. M. Nishikawa); 2 ♀ 3 ♂ (Ebina [MNC] Nishikawa private coll); Mt. Molwa, 29.ix.1975 (coll. P. Schaefer); 1 ♀ (Ottawa, priv. coll. [SBPC]); Nopporo [43°1'N, 141°29'E] 12.vi.1987 (coll. M. Ohara); 1 ♀ 1 ♂ (Calgary [DSSC]); same locality [43°1'N, 141°29'E] 18.vi.1987 (coll. M. Ohara); 1 ♀ (Calgary [DSSC]); same locality [43°1'N, 141°29'E] 22.vi.1987 (coll. M. Ohara); 2 ♂ (Calgary [DSSC]); Nopporo, Ebetsu [43°1'N, 141°29'E] 29.vi.–4.vii.1992 (coll. K. Konishi); 3

♀ (Ibaraki [ITLJ]); Otaru, 43.23°N, 140.98°E, 8.iix.2000 (coll. S. Suzuki); 1 DNA voucher 05 ♀ (Calgary [DSSC]); **Sapporo [43°N, 141.35°E] 5–16.iix.1880 (coll. G. Lewis); 1 ♂ (London [BMNH]); same locality [43°N, 141.35°E] 1–30.iix.1923 (coll. J. F. Illingworth); 1 ♀ (Honolulu [BPBM]); ****same locality [43°N, 141.35°E] 19.iix.1927 (coll. T. R. Gardner); 2 ♀ (USNM); ****Sapporo, Yezo [44°N, 143°E] 26.vii.1923; 2 ♂ (San Francisco [CASC]); Shikotu Lake, elev. 252 m, 42°46.205'N, 141°24.725'E, 25.vi.1998 (coll. S. Suzuki); 1 DNA voucher 03 ♂ (Calgary [DSSC]) [Honshu], Aomori pref., Mayogatai [40.82°N, 140.75°E] 26–28.vi.1980 (coll. S. Naomi); 1 ♀ (Lawrence [SEMC]); Ashiyasu, Yamanashi P., Hirogawara, elev. 1450 m [34.8°N, 137.9°E] 18.iix.1996 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); Chiba, Fudago, Kimitsu, Mt. Kiosumi, elev. 180 m [35.6°N, 140.1°E] 19.vii.1991 (coll. A. Smetana); 1 ♀ (Ottawa [CNCI]); ****Fudakake (Kanagawa) [35.5°N, 139.5°E] 14.vi.1980 (coll. M. Nishikawa); 3 ♀ 3 ♂ (Ebina [MNC] Nishikawa private coll); Fuji Yama [35.36°N, 138.2°E] 4.x.1976 (coll. Ksuback); 1 ♂ (Praha, priv.coll [JRC]); ****Fukushima Pref., Hinoemata [37.02°N, 139.4°E] 3–4.iix.1984 (coll. I. Hattori); 1 ♀ (Ibaraki [ITLJ]); **Fukushima pref., Iitate-mura, 7.vii.1985 (coll. S. Nomura); 1 ♀ (Lawrence [SEMC]); **Fukushima Pref. Iitate-mura, 7.vii.1985 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); ****Gassan, Yamagata-Ken [38.5°N, 140.25°E] 22.iix.1931; 1 ♀ (San Francisco [CASC]); Gumma Pref., Nikko distr., 1980 (coll. P. M. Hammond); 1 ♀ 1 ♂ (London [BMNH]); Hachiiiji Shr., Kowakama Funabashi C., Chiba Pref. [35.7°N, 139.9°E] 30.v.1996 (coll. S. Nomura); 1 ♂ (Tokyo [NSMT]); **Hakone [35.183°N, 139°E] 17–19.iv.1880 (coll. G. Lewis); 1 ♂ (London [BMNH]); **Hakone (Kanagawa) [39.02°N, 141.7°E] 15.iix.1969 (coll. K. Masumoto); 2 ♂ (Ebina [MNC] Nishikawa private coll); **Hayama [35.26°N, 139.6°E] 1–31.x.1951; 1 ♀ (Honolulu [BPBM]); **same locality [35.26°N, 139.6°E] 1–31.x.1951 (coll. Langford); 1 ♂ (Ottawa, priv. coll. [SBPC]); **same locality [35.26°N, 139.6°E] 1.v.–30.vi.1952; 1 ♀ (Honolulu [BPBM]); **Hikawa Daiboretsu Younanashi [?] [35.8°N, 139.1°E] 27.vii.1983 (coll. Masaki); 1 ♀ (Ottawa, priv. coll. [SBPC]); **Hiogo. [34.65°N, 135.2°E](coll. Schonfeldt); 3 ♀ 3 ♂ (Frankfurt [SMFD]); **same locality [34.65°N, 135.2°E](coll. G. Lewis); 1 ♂ (London [BMNH]); Ibaragi Pref., Suifu-mura, Adera [34.81°N, 135.56°E] 21–23.iix.1995 (coll. Hisanori Hamaji); 1 ♂ (Tokyo [NSMT]); Iwate, Iwaizumi, Hitsuton, elev. 800 m [39.85°N, 141.8°E] 11–17.iix.1991 (coll. A. Smetana); 7 ♂ (Ottawa [CNCI]); same locality, elev. 800 m [39.85°N, 141.8°E] 11–17.iix.1991 (coll. A. Smetana); 1 ♀ 1 ♂ (Praha, priv.coll [JRC]); same locality, elev. 770 m [39.85°N, 141.8°E] 11–17.iix.1991 (coll. A. Smetana); 2 ♀ (Praha, priv.coll [JRC]); Iwate, Kawai, Yoshbezawa, elev. 470 m [36.3°N, 137.12°E] 12.iix.1991 (coll. A. Smetana); 1 ♀ (Ottawa [CNCI]); **Iwate pref., Kawara-bo, Mt. hayachine [39.56°N, 141.4°E] 22–24.vi.1980 (coll. S. Naomi); 1 ♀ (Lawrence [SEMC]); Iwate, Sugo, Takizawa, Iwate Un. Exp.

For., elev. 220 m, 11.iix.1991 (coll. A. Smetana); 2 ♀ (Ottawa [CNCI]); Kagosaka Pass, Mt. Fuji, Yamanashi P., elev. 1150 m [35.36°N, 138.7°E] 5.iix.1996 (coll. S. Nomura); 1 ♂ (Tokyo [NSMT]); **Kamikochi, Northern Alps, elev. 1524 m [36.3°N, 137.97°E] 29.vii.1939 (coll. E. Suenson); 1 ♀ 1 ♂ (Kobenhavn [ZMUC]); Kanagawa, Hayama [35.26°N, 139.6°E] 1.v.1984 (coll. Takasu Masaka); 1 ♀ (Amsterdam [ZMAN]); **Kobe [34.6°N, 135.2°E](coll. G. Lewis); 1 ♀ 1 ♂ (London [BMNH]); **Kyoto [35°N, 135.75°E] 20.vii.1957 (coll. M. A. Z.); 1 ♀ (Chicago [FMNH]); Kyoto Pref. Ashu, 22.vii.1998 (coll. K. Araya); 1 DNA voucher 04 ♀ (Calgary [DSSC]); Kyoto Pref. Kyoto, Yase Forest, 35°3.908'N, 135°48.521'E, 21.vi.1998 (coll. D. S. Sikes); 1 DNA voucher 01 ♂ (Calgary [DSSC]); Kyoto Pref. Kyoto, Yase Forest, 35°03.908'N, 135°48.521'E, elev. 240 m, 35°3.908'N, 135°48.521'E, 15.vi.1998 (coll. Tomoyoshi Nishimura); 1 larva (Calgary [DSSC]); Mikuni Pass, Yuzawa T. Niigata P., elev. 1050 m [37.92°N, 139°E] 27.vii.1996 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); **Miyazaki Pr., Shiiya Pass, Shiiba-son [37.46°N, 138.6°E] 1.vii.1994 (coll. S. Nomura); 1 ♂ (Tokyo [NSMT]); Mt. Akagisan, Fujimi V. Gumma P., elev. 1450 m [36.55°N, 139.18°E] 27.vii.1996 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); Mt. Donden-yama, Sado Is., Niigata Pref., elev. 750 m [38°N, 138.41°E] 30.iv.–26.v.1990 (coll. M. Nishikawa); 1 ♀ 1 ♂ (Ebina [MNC] Nishikawa private coll); Mt. Norikuradake, Azumi V., Nagano Pref., elev. 2100 m [36.1°N, 137.5°E] 5–10.iix.1995 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); Mt. Ohdnigahara, Nara Pref. [34.18°N, 136°E] 11–12.vi.1988 (coll. M. Nishikawa); 2 ♂ (Ebina [MNC] Nishikawa private coll); **Mt. Ohtaki Kagawa pref [34.25°N, 134°E] 8.iix.1958 (coll. H. Toshima); 3 ♀ (San Francisco [CASC]); ****Mt. Takao, Tokyo [35.62°N, 139.25°E] 3.vii.1960 (coll. S. Tachikawa); 1 ♀ (East Lansing [MSUC]); ****Nagano [36.65°N, 138.167°E] 18.ix.1952 (coll. H. Hasegawa); 5 ♀ (Ibaraki [ITLJ]); ****Nagano Pref. (Otari spa) Otari V. [36.76°N, 137.9°E] 3–5.iix.1984 (coll. A. Saito); 1 ♀ (Ibaraki [ITLJ]); **Niigata, Asahi Village, Riv. Satura, elev. 300 m, 38°17'N, 139°44'E, 28.iix.1996; 30.iix.1998 (coll. L. Masner); 2 ♀ 1 ♂ (Praha [JSCC]); **Niigata, Tainai Riv, elev. 500 m, 38°17'N, 139°44'E, 28.iix.1996; 31.iix.1998 (coll. L. Masner); 1 ♂ (Praha [JSCC]); **Nikko [36.75°N, 139.6°E](coll. Harrington); 1 ♀ (Ottawa [CNCI]); **Nikko, Chuzenjiko, elev. 1300 m, 15.iix.1998 (coll. M. Kon); 5 ♀ 4 ♂ (Calgary [DSSC]); **Nikko, Yunoko, elev. 1400 m, 14.iix.1998 (coll. M. Kon); 4 ♀ 4 ♂ (Calgary [DSSC]); ****Nikkozawa, Okukinu (L. T.) Tochigi [36.38°N, 139.8°E] 12.ix.1987 (coll. K. Konishi); 1 ♀ (Ibaraki [ITLJ]); Nishitama, Mt. Mitake [35.96°N, 138.9°E] 18.v.1979 (coll. C. W. Mills, III); 1 ♀ (Honolulu [BPBM]); ****Oku; Chichibu, Saitama P. [36°N, 139.5°E] 21–23.x.1967 (coll. H. Hasegawa); 1 ♀ (Ibaraki [ITLJ]); Otome-kogen, Makioka, Yamanashi P., elev. 1450 m, 8.iix.1996 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); ****Sasuna, Tsushima [35°10'N, 136°45'E] 28.iix.1975 (coll. M. Nishimura);

1 ♀ (Ebina [MNC] Nishikawa private coll); **Sugitate, Matsushima [38.367°N, 141.067°E] 24.iv.1959 (coll. S. Shimomaga); 1 ♀ (Columbia [UMRM]); ****Takao; san [34.81°N, 135.85°E] 9.ix.1949 (coll. S. Kato); 1 ♀ (Ibaraki [ITLJ]); Tochigi, Kuriyama, betw. Meotobuchi and Kaniyu, elev. 1420 m [36.4°N, 139.8°E] 20–23.ix.1991 (coll. S. Nomura); 1 ♀ 1 ♂ (Ottawa [CNCI]); Tochigi Pref. Nikko [36.75°N, 139.6°E] 14.x.2005 (coll. S.Suzuki); 1 ♀ (Tokyo [NSMT]); ****Tochigi Pref., Yaita [36.78°N, 139.9°E] 30.vi.–15.vii.1989 (coll. K. Konishi); 1 ♂ (Ibaraki [ITLJ]); ****Tokio [Tokyo] [35.75°N, 139.5°E]; 1 N. immaculatus holotype [jnr] ♂ (Paris [MNHN]); **Tokyo [35.75°N, 139.5°E](coll. Bodemeyer); 1 ♀ (Frankfurt [SMFD]); **same locality [35.75°N, 139.5°E]1925; 1 ♂ (Chicago [FMNH]); **Towada Sake [40.617°N, 141.217°E] 22.vi.1926 (coll. E. Suenson); 1 ♂ (Kobenhavn [ZMUC]); ****Tsushima [Island] [34.33°N, 129.33°E](coll. Fruhstorfer); 3 ♀ (Frankfurt [SMFD]) 8 ♀ 4 ♂ (Paris [MNHN]); **same locality [34.33°N, 129.33°E]; 1 ♀ (Wien [NHMW]); **Wakayama-pref. [34°N, 135.55°E] 1–31.ix.1977; 9 ♀ (Washington D.C. [USNM]); ****Yamagata Pref., Mt. Haguro [36.6°N, 140.4°E] 11–12.vii.1974 (coll. A. Kawada et al.); 1 ♀ (Ibaraki [ITLJ]); ****Yamagata Pref., Shizu [36.3°N, 139.6°E] 26.vi.1955 (coll. H. Hasegawa); 1 ♀ (Ibaraki [ITLJ]); **Yamanashi Ken Pref., Tabayama V., Nr. Sanjo Spa [37.6°N, 138.98°E](coll. M. Maruyama); 3 ♀ 5 ♂ (Calgary [DSSC]); Yasyajin Pass, Ashiyasu-mura Yamanashi Pr. [35.63°N, 138.4°E] 1–8.vii.1995 (coll. S. Nomura); 1 ♂ (Tokyo [NSMT]); **Yokohama [35.47°N, 139.63°E](coll. G. Lewis); 1 ♀ 2 ♂ (London [BMNH]); **same locality [35.47°N, 139.63°E] 25.ix.1928; 1 ♂ (Washington D.C. [USNM]); **[Kyushu], Aburatsa [Aburatsu] [31.567°N, 131.4°E] 4.x.2001 (coll. Dofleir); 1 ♀ (München [ZSMC]); **Fukuoka, Mt. Tachibana; YPT, [33.68334°N, 130.4666°E] 18–24.vi.1979 (coll. K. Yamagishi); 2 ♀ (Ottawa [CMNC]); **Fukuoka, Mt. Tachibana; YPT [33.6833°N, 130.4666°E] 1–6.vii.1979 (coll. K. Yamagishi); 2 ♂ (Ottawa [CMNC]); **same locality [33.6833°N, 130.4666°E] 7–13.vii.1979 (coll. K. Yamagishi); 2 ♂ (Ottawa [CMNC]); **Fukuoka Pref. Hikosan [33.48°N, 130.9°E] 6.ix.1965; 1 ♀ (Honolulu [BPBM]); **Fukuoka Pref., Mt. Sefurisan (sanagiko tr.) Fukuoka C. [33.43°N, 130.36°E] 23.ix.1994 (coll. S. Nomura); 1 ♂ (Tokyo [NSMT]); **Iriki, Kagoshima [31.8°N, 130.4°E] 18.vi.1983 (coll. K. Sugawara); 1 ♂ (Calgary [DSSC]) 1 ♀ (Otaru [MOC]); **Kumamoto Pr., Mt. Shiraga-dake Kuma-gun, elev. 1100 m [32.83°N, 130.7°E] 29.ix.1992 (coll. F. Hirokawa); 1 ♀ (Tokyo [NSMT]); ****Kumamoto Pr., Nishinokubo, Hondo, Amakusa [32.83°N, 130.7°E] 9.ix.1989 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); ****Miyazaki Pref., Mt. Morozuka, Takachiho T. [32.7°N, 131.3°E] 10.ix.1994 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); ****(Mt. Ohboshiyama), Mine, Tsushima Is., Nagasaki Pref. [32.83°N, 129.92°E] 5–9.vii.1983 (coll. H. Makihara); 1 ♀ (Ebina [MNC] Nishikawa private coll); **Nagasaki [32.75°N,

129.9°E](coll. G. Lewis); 1 ♀ 1 ♂ (London [BMNH]); ****Oita pref., Mt. Kurodake (dead meat) Kuju Mts. [33.25°N, 131.5°E] 21.iix.1994 (coll. S. Nomura); 1 ♀ (Tokyo [NSMT]); **Okawarindô, Yakushima Is., Kagoshima Pref., 20.vii.1992 (coll. H. Karube); 1 ♀ 1 ♂ (Ebina [MNC] Nishikawa private coll); ****Oneyama, nr. Usui Pass [33.56°N, 130.7°E] 14.vi.1973 (coll. A. Kawada et al.); 2 ♀ (Ibaraki [ITLJ]); **Saga Pref., Ichikawa, Fuji-cho [33.33°N, 130.5°E] 18.v.1991 (coll. Ryo Noda); 1 ♀ (Tokyo [NSMT]); **Wakamatsu [33.933°N, 130.8°E] 18.vii.1967 (coll. N. M.); 1 ♀ (Chicago [FMNH]) [Nansei Isles], Yakushima [30.3°N, 130.5°E] 1899; 1 ♀ (London [BMNH]) 16 ♀ 6 ♂ (Paris [MNHN]); Shikoku, Ishizuchi Mt. NP, Omogo Valley, elev. 700 m [33.75°N, 133.5°E] 18–25.iix.1980 (coll. Peck); 9 ♀ 5 ♂ (Ottawa [CMNC]) 1 ♀ (Praha [JSCC]); Ishizuchi Mt. NP, Tsuchigoya, elev. 1400 m [33.75°N, 133.5°E] 11–18.iix.1980 (coll. Peck); 13 ♀ 5 ♂ (Chicago [FMNH]) 31 ♀ 14 ♂ (Ottawa [CMNC]) 20 ♀ 8 ♂ (Ottawa [CNCI]) 42 ♀ 23 ♂ (Ottawa, priv. coll. [SBPC]); Ishizuchi Mtn. NP, Omogo Valley, elev. 700 m [33.75°N, 133.5°E] 18–25.iix.1980 (coll. [Peck]); 4 ♀ 4 ♂ (Chicago [FMNH]); ****Mt. Takao [33.8°N, 135.65°E] 15.v.1966; 1 ♂ (Ibaraki [ITLJ]); **Tokushima pref., Mt. Tsurugi [33.75°N, 134°E] 19–20.vi.1981 (coll. S. Naomi); 1 ♀ 1 ♂ (Lawrence [SEMC]);

KOREA: Kekki, 5.ix.1956 (coll. Dr. M. Magyar); 1 ♀ (Budapest [HNHM]); Mt. Taebaek, 31.vii.1986 (coll. Cho); 2 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]); Seishen-Olto Nord Korea (coll. A. Kricheldorf); 1 ♂ (Frankfurt [SMFD]) 1 ♂ (Praha [NMPC]); Seishin [41.83°N, 129.92°E]; 3 ♀ 8 ♂ (Dresden [SMTD]) 2 ♀ 2 ♂ (Frankfurt [SMFD]) 1 ♀ (München [ZSMC]) 1 ♀ (Wien [NHMW]); **Seishin, Corea [41.83°N, 129.92°E]; 1 ♂ (Frankfurt [SMFD]); Seishin; Olto, Nord-Korea [41.83°N, 129.92°E](coll. A. Kricheldorf); 1 ♀ (Frankfurt [SMFD]); Seoul, Korea [37.57°N, 127°E] 23.vi.1953; 3 ♀ 6 ♂ (Washington D.C. [USNM]); Tshon-Bon-San, 3.ix.1956 (coll. Dr. M. Magyar); 1 ♂ (Budapest [HNHM]); Yankovsrey?; 1 ♂ (USNM); Cheju Prov., Cheju-do, Halla-san 5km SW Cheju city [33.36°N, 126.53°E] 24.iix.1992 (coll. L. Ronkay & A. Vojnits); 1 ♀ (Budapest [HNHM]); Cheju-do, Halla-san N.P., elev. 1280 m [33.36°N, 126.53°E] 24.iix.1992 (coll. L. Ronkay & A. Vojnits); 2 ♀ (Budapest [HNHM]); Cheju-do, Halla-san Songpanak, elev. 750 m [33.36°N, 126.53°E] 24.iix.1992 (coll. L. Ronkay & A. Vojnits); 2 ♀ 2 ♂ (Budapest [HNHM]); Cheju-do, Mt. Halla-san, Yongshil route, 33°21'N, 126°30'E, 30.iv.1994 (coll. Peregovits, Ronkay & Vojnits); 1 ♀ (Budapest [HNHM]); Kangwon Prov., Kumgang-san [38.64°N, 128.15°E] 26.v.1985 (coll. A. Vojnits & L. Zombori); 2 ♀ (Budapest [HNHM]); same locality [38.64°N, 128.15°E] 10.vi.1991; 30.ix.1979 (coll. Ronkay & Vojnits); 1 ♀ (Budapest [HNHM]); same locality [38.64°N, 128.15°E] 10.vi.1991 (coll. Ronkay & Vojnits); 1 ♀ 3 ♂ (Budapest [HNHM]); same locality [38.64°N, 128.15°E] 13.vi.1991 (coll. Ronkay & Vojnits); 1 ♀ (Budapest [HNHM]); same locality [38.64°N, 128.15°E] 1–4.iix.1991 (coll. A. Baldi & Z.

Waliczky); 1 ♀ (Budapest [HNHM]); Kungang-san, Kuryong valley [38.64°N, 128.15°E] 14.vi.1991 (coll. Ronkay & Vojnita); 1 ♀ (Budapest [HNHM]); Kungang-san, Mammul-san [38.64°N, 128.15°E] 11.vi.1991 (coll. Ronkay & Vojnita); 1 ♂ (Budapest [HNHM]); Kungangsan env. [38.64°N, 128.15°E] 1–30.vi.1988 (coll. Kim); 1 ♀ (Praha, priv.coll [JRC]); Mt. Kungang-San [38.64°N, 128.15°E] 26.ix.1979 (coll. Dr. H. Steinmann et Dr. T. Vásárhelyi); 1 ♀ (Budapest [HNHM]); same locality [38.64°N, 128.15°E] 26–30.ix.1979 (coll. Dr. H. Steinmann et Dr. T. Vásárhelyi); 6 ♀ 5 ♂ (Budapest [HNHM]); Mts. Kungang-san [38.64°N, 128.15°E] 20.ix.1980 (coll. Topál & Forró); 1 ♀ 1 ♂ (Budapest [HNHM]); North Pyongan Prov., Myohyang-san, Hotel Myohyang [40.03°N, 126.28°E] 28.v.1991 (coll. Ronkay & Vojnita); 2 ♀ (Budapest [HNHM]); South Hwanghae Prov., Haeju, Suyong-san [38.07°N, 125.67°E] 16.x.1987 (coll. Z. Korsós & L. Ronkay); 1 ♂ (Budapest [HNHM]); **RUSSIA**: [Ákovlevka Spas. u. Ussur. kr]?, 21.vi.1926 (coll. [Dqákonov Filiphev"]?); 1 ♀ 2 ♂ (Ottawa, priv. coll. [SBPC]); Ussuri reg., Kamenuschka, Soviet Union, 24–28.vii.1989 (coll. N. Nikodya); 2 ♀ 2 ♂ (Ottawa [CMNC]) [Ussuri reg], Primorie: Anuchino distr. [43.983°N, 133.017°E] 25.vi.1994 (coll. A. Gorodinski); 4 ♀ (Chicago [FMNH]); **Primorie reg.: Barabash; Levada, 19.vii.1993 (coll. A. Gorodinski); 1 ♀ (Chicago [FMNH]); **Primorie reg.: Chernye Gory (Black Mts.), Gryaznaia River, 1–30.vi.1990 (coll. S. Plutenko); 9 ♀ 8 ♂ (Chicago [FMNH]); **Primorje region: Ussurijsky Nat Res. Territory, 80 km NNE Vladivostok, nr Kamenushka [54.13°N, 123.72°E] 2.vii.1990 (coll. Gy. Sziráki); 1 ♀ (Budapest [HNHM]); **same locality [54.13°N, 126.72°E] 11.vii.1990 (coll. Gy. Sziráki); 1 ♂ (Budapest [HNHM]); ****Primorje : Sib. or. -m. Komarowka flum. Kamenushka env., elev. 300 m [54.13°N, 126.72°E] 4.v.1992 (coll. Vorísek); 1 ♀ (Ottawa [CNCI]); ****Primorskij Kr. Arsenev env. , 27.v.–5.vii.1991 (coll. D. Sausa); 2 ♂ (Praha, priv.coll [JHC]); **Primorskij kraj: Nakhodka [42.88°N, 132.9°E] 6.iix.1999 (coll. B. D. Gill); 1 DNA voucher 02 ♀ (Calgary [DSSC]); **Primorskij kraj: Novocugujevka, 26–31.vii.1992 (coll. Snizek); 4 ♀ 1 ♂ (Praha, priv.coll [JRC]); **Primorsky: 30 km NE Vladivostok, Tajvaza [43.15°N, 131.88°E] 29.vii.–5.iix.1992 (coll. B. D. Gill); 4 ♂ (Ottawa [CMNC]); **same locality [43.15°N, 131.88°E] 4–5.iix.1992 (coll. B. D. Gill); 3 ♀ (Ottawa [CMNC]); ****USSR, Primorsk Kraj, Arsenev env., 1–30.vi.1991 (coll. Strba); 1 ♀ 1 ♂ (Wien [NHMW]); ****Ussuri, Kameuska (coll. Cerveuka lgt.); 1 ♀ (Ithaca [CUIC]); ****Ussuri-country, Ussurijak, Kajmanovka, 1–4.iix.1990 (coll. D. Boukal); 3 ♀ 1 ♂ (Ottawa, priv. coll. [SBPC]); **SOUTH KOREA**: Mt. Sudo-san, elev. 500 m [35.86°N, 127.99°E] 16–19.ix.1989 (coll. K. Yamagishi); 5 ♀ 5 ♂ (Ottawa, priv. coll. [SBPC]); **TAIWAN**: Formosa, elev. 3744 m [23.5°N, 121°E] 12.iix.1965; 1 ♀ (Chicago [FMNH]).

Literature or database records. CHINA: Heilongjiang, Kaolingtze [=Gaolingzi] [44°52'N, 128°50'E] 2.vii.1940 (Růžička, Schneider, Sikes & Hava 2002); Shang-zhi county, Mao'er Shan, elev. 2200 m [45°16'N, 127°31'E] 19.vi.1988 (Růžička, Schneider, Sikes & Hava 2002); CHINA: Jiangxi, Kiukiang [=Jiujiang] [29°43'N, 115°58'E] 1–30.vi.1887 (coll. A.E. Pratt) (Růžička, Schneider, Sikes & Hava 2002); NORTH KOREA (Nikolajev & Kozminykh 2002); RUSSIA, east of the Ural river (Nikolajev & Kozminykh 2002).

Nicrophorus reticulatus Sikes & Madge, sp. nov.

Material examined

Holotype. ♂, labelled “**SOLOMON ISLANDS:** Guadalcanal, Popomanasin, elev. 5000'[1524 m] [9.7°S, 160.07°E] 20.x.1965 (coll. P. Greenslade) BMNH000895Nic.” (London [BMNH]).

Paratypes. 3 ♂. **SOLOMON ISLANDS:** Guadalcanal, Beomahat?, elev. 1417 m, 19.vi.1965; 1 ♂: BMNH000898Nic; same locality as holotype, 24.x.1965 (coll. P. Greenslade); 1 ♂: BMNH000826Nic; Guadalcanal, Vununalekama, elev. 1341 m, 9.xi.1965; 1 ♂: BMNH000899Nic.

Nicrophorus schawalleri Sikes & Madge, sp. nov.

Material examined

Holotype. ♀, labelled “[CHINA] Taibai Shan above Houshenzi, elev. 2500–2600 m [33.96°N, 107.7°E] 9 vi; 3.vii.1998 (coll. P. Jager & J. Martens) SMNS080911Nic.” (Stuttgart [SMNS]).

Paratypes. 39 ♂, 40 ♀, 2 adults. **CHINA: Gansu prov.,** S, Venxian env., 18–26.vi.1995 (coll. Benes); ♂: JSC003452Nic (Praha, priv.coll [JSC]); South Gansu Prov., Min Shan Mountains, 70 km NW of Wudu, elev. 2100 m [34°0'N, 104.95°E] 1.vi.1997 (coll. A. Gorodinski); 3 ♀: MNC122659Nic, MNC122660Nic, MNC122661Nic, 10 ♂: MNC122649Nic, MNC122650Nic, MNC122651Nic, MNC122652Nic, MNC122653Nic, MNC122654Nic, MNC122655Nic, MNC122656Nic, MNC122657Nic, MNC122658Nic (Ebina [MNC] Nishikawa private coll); **Shaanxi prov.,** Qin Ling Mountains, Mt. Taibai Shan, elev. 2200 m [33°55'N, 107°44'E] 1–31.ix.2004 (coll. V. Siniaev et al.); 1 ♀: MNC122662Nic (Ebina [MNC] Nishikawa private coll); Qinling mts. Xunyangba (12km SW), elev. 2000–2250 m [35°N, 109°E] 14–18.vi.1998 (coll. I. H. Marshal); 1 ♀: JSC080911Nic, 2 ♂: JSC080909Nic, JSC080910Nic

(Praha, priv.coll [JSC]); 5 ♀: SMNS080912Nic, SMNS080914Nic, SMNS080915Nic, SMNS080916Nic, SMNS080917Nic, 7 ♂: SMNS080913Nic, SMNS080918Nic, SMNS080919Nic, SMNS080920Nic, SMNS080921Nic, SMNS080922Nic, SMNS080923Nic (Stuttgart [SMNS]); Tschingling Mts.Taibeichan Nat. Res. [Qinling Mountains; Taibaishan Nature Reserve], elev. 2000 m [33°53'N, 107°49'E] 5–15.ix.2005; 1 ♀: BMNH123518Nic, 2 ♂: BMNH123519Nic, BMNH123520Nic (London [BMNH]); **Sichuan Prov.**, Bashan (Chengjiao Xian) Daba Shan Mts. , elev. 1600–1900 m, 32°9'N, 108°4'E, 1.v.–31.vii.1995 (coll. “Native collector”); 3 ♀: DSSC006248Nic, DSSC006249Nic, DSSC006250Nic, 2 ♂: DSSC006246Nic, DSSC006247Nic (Calgary [DSSC]); Daxue Shan Gongga Shan Mt. Hailuoguo, Glacier Park env. Camp 2, elev. 2650 m [29.35°N, 101.02°E] 30.v.1997 (coll. A. Putz); 1 ♂: JSC080908Nic (Praha, priv.coll [JSC]); Ganzi prefecture, Kangding Co., Pengta town, Tongling village, elev. 2585 m, 30°29.519'N, 102°18.258'E, 30.ix.2005 (coll. D. S. Sikes); DNA voucher 01 adult: DSSC123375Nic, DNA voucher 02 adult: DSSC123376Nic, 8 ♀: DSSC123541Nic, DSSC123542Nic, DSSC123543Nic, DSSC123544Nic, DSSC123545Nic, DSSC123547Nic, DSSC123549Nic, DSSC123553Nic, 6 ♂: DSSC123546Nic, DSSC123548Nic, DSSC123550Nic, DSSC123551Nic, DSSC123552Nic, DSSC123554Nic (Calgary [DSSC]); 2 ♀ IOZ-CAS123557Nic, IOZ-CAS123558Nic 2 ♂ IOZ-CAS123555Nic, IOZ-CAS123556Nic (Beijing [IOZ-CAS]); Gongga Shan mt. Moxi [31.37°N, 102.12°E] 21–24.vii.1992 (coll. J. Schneider); 2 ♂: JSC003450Nic, JSC003451Nic (Praha, priv.coll [JSC]); Kanding [Kangding], elev. 3000 m [30°5'N, 102°4'E] 23–27.vii.1995 (coll. J. Schneider); 1 ♂: JSC003449Nic (Praha, priv.coll [JSC]); ****Lu Ding Chiao, elev. 1524 m [29.9°N, 102.317°E] 20.ix.1937 (coll. [D. C. Graham]); 1 ♀: SBPC004504Nic (Ottawa, priv. coll. [SBPC]); N, Jiuzhaigou [33°17'N, 105°55'E] 12–16.vi.1995 (coll. Benes); 1 ♀: JHC001845Nic (Praha, priv.coll [JHC]); **Szechuan, Mukue Tatsienlu [30.04°N, 102.03°E]; 2 ♀ NMPC082224Nic, NMPC082225Nic (Praha [NMPC]); **same locality [30.05°N, 102.03°E](coll. Em. Reitter); 1 ♀: JSC003453Nic (Praha, priv.coll [JSC]); ****Szechuan, Wassuland, Chunghwa (coll. Reitter); 1 ♀: NMPC082185Nic (Praha [NMPC]); **Szechwan, MuSangTsai, 10 mi NW WeiChow, elev. 2713 m, 26–28.vii.1933 (coll. D C Graham); 1 ♀: USNM083614Nic (USNM); **Tatsienlu Kiulong [Jiulong] [29°N, 101.8°E](coll. Reitter); 1 ♀: NMPC082226Nic, 1 ♂: NMPC082223Nic (Praha [NMPC]); W , Daxue Shan Hailuoguo, Glacier Park (Gongga Shan) Camp 2, elev. 2500–2700 m [29.35°N, 101.02°E] 30–31.v.1997 (coll. Wrase); 3 ♀: SMNS080937Nic, SMNS080938Nic, SMNS080939Nic (Stuttgart [SMNS]); W Sichuan, Aba pref. Nanping count. (regio silv.), elev. 2500 m, 33°12'N, 103°54'E, 28.v.–6.vi.1990 (coll. Görgner & Kleinfeld); 2 ♂: SMNS003348Nic, SMNS003349Nic (Stuttgart [SMNS]); Wolong, elev. 1800–2700 m [27.83°N, 101.83°E] 20–

21.vii.1990; 1 ♀: MNHN001305Nic (Paris [MNHN]); **[unknown prov.], Hai; tsi; pin, elev. 3962 m, 1.vii.–31.ix.1937 (coll. D. C. Graham); 3 ♀: SBPC004505Nic, SBPC004506Nic, SBPC004508Nic (Ottawa, priv. coll. [SBPC]); ****same locality, elev. 3962 m, 1–31.ix.1937 (coll. D. C. Graham); 1 ♀ SBPC004507Nic (Ottawa, priv. coll. [SBPC]).

Nicrophorus trumboi Sikes & Madge, sp. nov.

Material examined

Holotype. ♀ labelled: “Nepal, Solu Khumbu Dist., Mtns east of Lukla, moist cloud forest, elev. 2840–2900 m, 27°41.243'N, 86°44.143'E, 20.viii.1999 (coll. D. S. Sikes) MCZC100197Nic.” (Cambridge [MCZC]).

Paratypes. 7 ♂, 9 ♀. **BHUTAN:** Lame gompa [walking distance from Bumtang] [27°33'N, 90°43'E] 1–30.ix.1977 (coll. W. Roder & L. Caminada); 1 ♀: SMNS003360Nic; **NEPAL:** elev. 3383 m, 31.v.1967; 1 ♂: CNCI000702Nic; 18.vi.1967; 1 ♂: CNCI000703Nic; 27.vi.1967; 1 ♂: CNCI000705Nic; Ganesh Himal betw. Golzong and Somathang, No. 13, elev. 1500–3600 m, 12–15.vii.1993 (coll. G. Csorba & M. Hreblay); 3 ♀: SMNS003355Nic, SMNS003356Nic, SMNS003357Nic, 1 ♂: SMNS003359Nic; Kangchenjunga Himal Mts. Ghunsa vill., elev. 3375 m, 27.4°N, 87.56°E, 6–10.vii.2000 (coll. Jan Schneider); 1 ♀: JSC080894Nic, 4 ♂: JSC080893Nic, JSC080895Nic, JSC080896Nic, JSC080897Nic; **Mal. tr., elev. 3383 m, 27°58'N, 85°0'E, 2.vi.1967; 1 ♂: CNCI000704Nic; Solu Khumbu Dist., Monju, moist pine 1°and 2°growth, elev. 2900 m, 27°46.2933'N, 86°43.788'E, 25.viii.1999 (coll. D. S. Sikes); DNA voucher 02, ♀: DSSC006325Nic; same data as holotype, 2 ♀: DSSC100198Nic, DSSC100199Nic, DNA voucher 01, ♂: DSSC006345Nic, 1 ♂: MCZC100196Nic; surroundings of Lukla, elev. 2800–4000 m [27.7°N, 86.72°E] 26 vi; 2.vii.1993 (coll. G. Csorba & M. Hreblay); 2 ♀: SMNS003354Nic, SMNS003358Nic, 1 ♂: SMNS003353Nic.